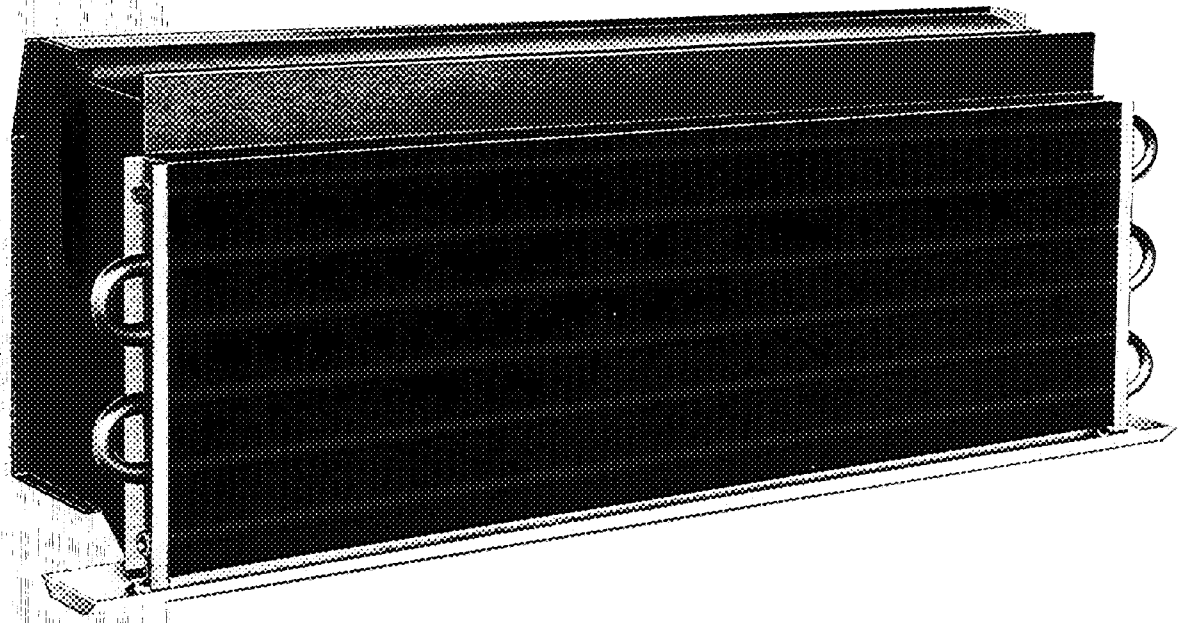


# Carrier Water Control Weathermaster® Induction Air Terminals

**36S**

19.4 – 131.9 cfm  
1770 – 8900 Btuh



# 36S Series Induction Air Terminals-

Water control Weathermaster® induction systems use 36S series air terminals for space-saving and economical air conditioning in office buildings, hotels, schools, and apartments to provide year 'round comfort in each room. Nine models are available in lobby, horizontal and vertical configurations, 5 for 2-pipe systems and 4 for 4-pipe systems. Each model comes in 4 sizes, each with a choice of 5 different nozzle arrangements to provide desired air flow. Terminals may be furred-in or enclosed in optional, decorator-styled cabinets. When you specify 36S terminals, you choose from

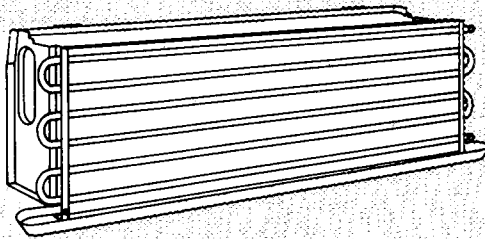
the best selection of models and capacities in the industry, and you are able to match the equipment to your job requirements more closely than has ever been possible before. Carrier's optimized computer selection assures that the terminals you buy meet the performance and sound criteria you need, without causing additional operating expense or energy waste as a result of improperly sized components.

Since 36S air terminals require no bulky or cumbersome ductwork that robs valuable space, building height requirements can be less, an important factor in

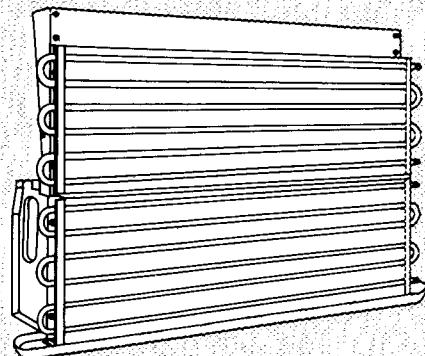
lowering total building cost. And that's not all — see the section entitled 14 Great Reasons to Choose a Carrier 36S Induction System on the next page!

Carrier, the most experienced maker of air terminals, builds the units of the 36S series to exacting standards governing product quality. Units are rated in accordance with the American Refrigeration Institute (ARI) Standard 445-66. And the nationwide Carrier Factory Service team stands behind every 36S terminal. You can't buy a better unit anywhere. If you're going induction, you can't afford not to consider the units of the 36S series.

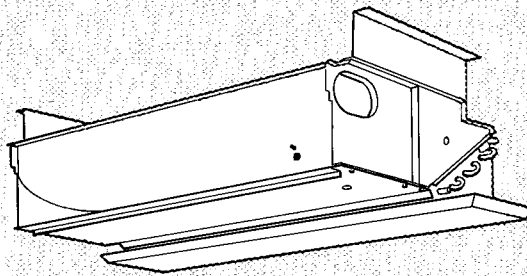
## Carrier has the right induction terminal for every 2-pipe system...



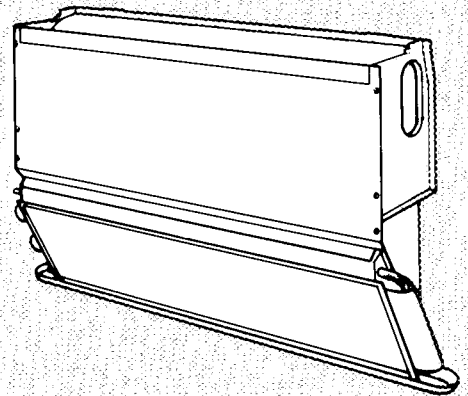
**36SL** lobby, single coil; measures only a foot high; for applications where the window arrangement calls for a small terminal with high capacity.



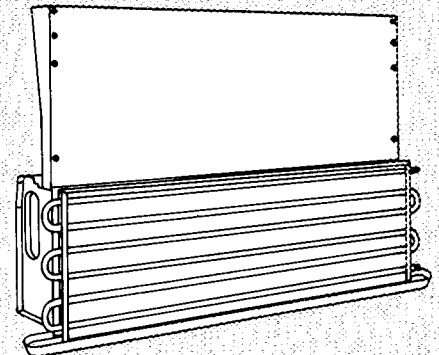
**36ST** a high-capacity vertical unit with a double-size coil for maximum cooling performance.



**36SH** the standard horizontal unit; ceiling mount to save valuable floor space.



**36SV** measuring less than 8-in. deep, this standard wall-hung unit is a real space saver.



**36SC** a vertical wall-hung unit with high-efficiency recovery stack; for use in areas where higher capacities are needed.

- **Heat and Cool from a single terminal** — and you can choose the most economical central station way to heat hot water, steam, electric.

- **Energy savings with gravity heat** — on vertical units, you can shut down the air distribution system and save fan horsepower. Hot water circulates to maintain the temperature in unoccupied rooms. Simple, economical convector heating.

- **Heat reclaim/energy conservation** — you can easily adapt an economizer cycle along with other reclaim/energy conservation methods such as double-bundle condensers, etc. to a 36S induction system.

The system may be 2-pipe or 4-pipe to best match the building's energy needs.

- **Low central station air handling system costs** — you save installation costs by minimizing building service connections for electricity, water, and drainage, you save operating, maintenance, and control costs since you can use high efficiency air cleaning equipment to realize decorating cost savings, while at the same time improving odor and pollen control . and you can use sprayed-coil dehumidifiers for more effective quality air supply and winter humidification

- **Automatic actual load adjustment** — system operating costs are not materially affected by the excess capacity of the system. The terminals automatically adjust to actual loads, thus allowing you wide design latitude without paying the penalty of high operating costs

- **Quiet, reliable operation** — each terminal has a specially designed balancing damper, acoustical plenum insulation, and high efficiency nozzles and coils to ensure reliably quiet operation. And no moving parts

- **Positive ventilation** — the primary air is always provided with a positive amount of outside ventilation air directly added to every module served by a 36S air terminal.

- **Constant air movement** — the primary air provides continuous air motion and circulation throughout the room.

- **Reliable temperature control** — each room is its own zone. Room occupants can have the temperature as they like it, and the unit responds to individual room load requirements

- **Greater rentable area** — typically, units are wall-hung or may be ceiling mounted so your design can make maximum use of rentable floor area

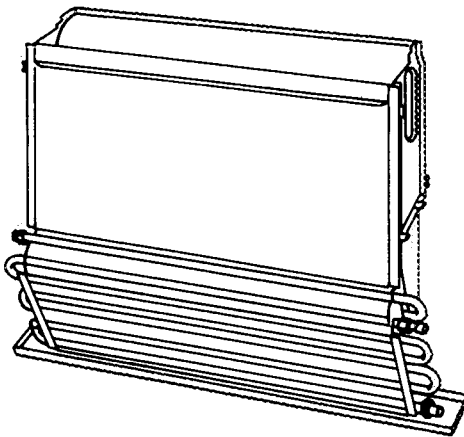
- **Reduced floor-to-floor height requirements** — the smaller, high-velocity air ducts used in these systems, along with small water pipes, can mean great savings in the overall height of the building itself

- **Positive year 'round humidity control** — the exterior zone humidity can be easily controlled by dehumidifying the constant air supply in the summer and humidifying during the winter.

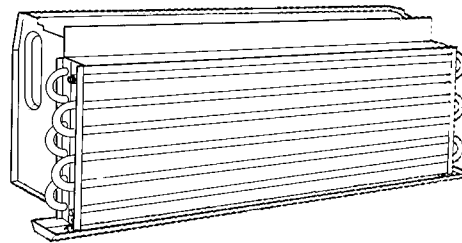
- **Complete design flexibility** — the wide range of capacities and models, coupled with the fact that Carrier offers units for both 2- and 4-pipe systems, leaves you an almost unlimited range of cost-trimming, energy saving design options.

- **Mechanical equipment is located remote from the room occupants** — the central system approach removes the sound-generating components from the building occupants. Simplifies equipment selection.

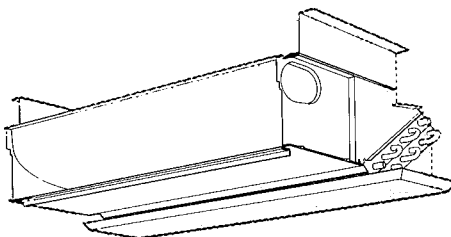
## ...and every 4-pipe system, too!



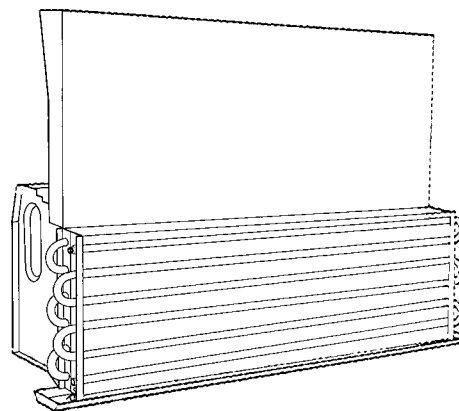
**36SD** standard vertical wall-hung unit with back-to-back coils.



**36SM** lobby, double coil unit; small terminal that fits under virtually every window.



**36SJ** the standard horizontal unit with double coil; may be ceiling mounted to save floor space.



**36SP** vertical wall-hung unit with high efficiency recovery stack and double coil; use in areas where high capacities are a must.

# Going 2-pipe or 4-pipe?

	2-pipe changeover	4-pipe
Best overall performance		X
Lowest operating cost		X
Best heat recovery potential		X
Lowest first cost	X	
Lowest installation cost	X	
Lowest control cost	X	
Lowest primary air required		X

Two-pipe non-changeover systems are less costly than 2-pipe changeover systems. However, the application potential of non-changeover systems is somewhat limited to areas with fairly mild winter design conditions. For this reason, the non-changeover 2-pipe system has been omitted from the cost comparison table.

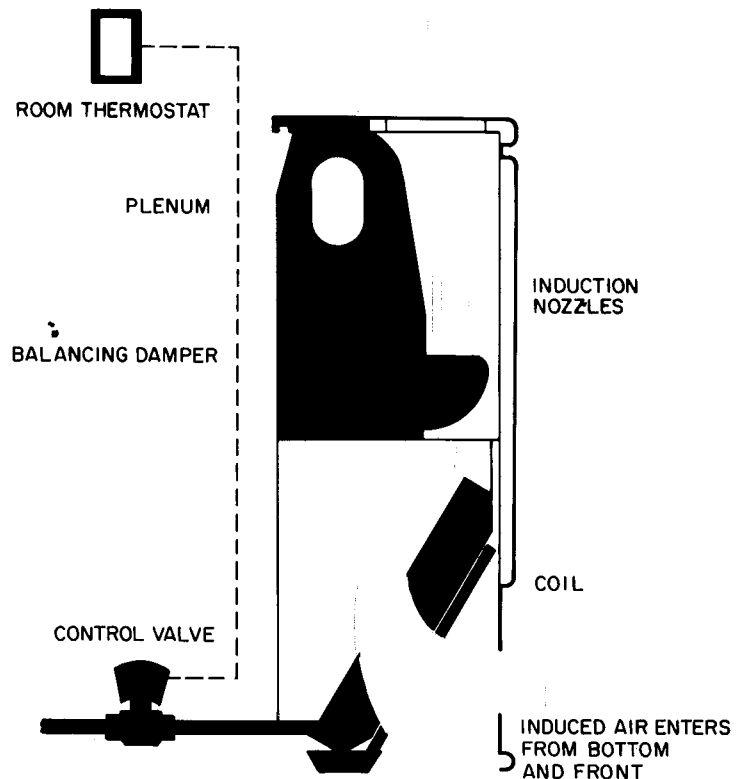
## How Water Control Induction Terminals work

A mixture of outdoor and return air is conditioned in the central station air handling apparatus and distributed thru a high-velocity, high-pressure duct system to the terminal unit. Typically, this duct runs up the side of the building, feeding into space-saving narrow take-off ducts on each floor. The conditioned primary air flows into the *unit plenum* and passes thru its *balancing damper* to the *induction nozzles*. This balancing damper can handle up to 3-in. wg pressure drop without adversely affecting the unit's sound power level. The entire plenum is surrounded with acoustical insulation.

As the primary air leaves the nozzles, it induces secondary (room) air thru the unit's coils. Depending on the temperature of the water supplied to the coils, the secondary air will either be cooled or heated. In a 4-pipe system, separate circuits are provided for hot and cold water.

Unit capacity is controlled either manually or by a *room thermostat* which modulates a field-installed *control valve*. The valve, in turn, modulates the water flow thru the coils to maintain the desired room temperature.

Depending on the degree of modular flexibility desired, one thermostat can control one or more units. Also, units may be used to feed air to adjacent units.



# Unit designations

Water Control Weathermaster® Air Terminals are designated by series, model, size, nozzles, hand, coil connections, and condensate pan.

Series and Model Size		3   6   S   V   2   -   H   R   2   2	Condensate Pan Coil Connection Hand R/L Nozzle
Series and Model	36SL	2-pipe units	Lobby unit
	36SC		Vertical unit with recovery stack
	36ST		Vertical unit with double coil
	36SV		Vertical wall-hung unit
	36SH		Horizontal unit
	36SD		Vertical wall-hung unit
Size	36SP	4-pipe units	Vertical unit with recovery stack
	36SM		Lobby unit
	36SJ		Horizontal unit
Nozzle*	1		Nominal 24-in. unit
	2		Nominal 32-in. unit
	3		Nominal 40-in. unit
	4		Nominal 52-in. unit
		F (Gray)	
Hand†			Gives performance midway between F and H
		G (Red)	Provides nominal coil capacity per cfm of primary air. Used for average office buildings with normal lighting loads and glass areas
		H (Black)	Gives performance midway between H and K
		J (Black and Green Alternate)	Provides highest coil capacity per unit size and highest air quantities. Used for high ventilation and high total loads
Coil Connections		K (Green)	Right-hand coil connection when facing unit
		R	Left-hand coil connection when facing unit
		L	Standard sweat fittings
Condensate Pan		0	Sweat fittings with manual air vent
		1	Flare fittings
		2	Flare fittings with manual air vent
	3	Standard emergency condensate pan	
	0 or 1	Drainable condensate pan, connections same hand as coil	
	2		

\*Nozzles are designed to optimize the thermal efficiency at minimum sound power generation.

They are suitable for handling up to 175 F supply air. Primary air quantity is controlled by the number and diameter of the holes in the nozzle.

†On 4-pipe units, coil hand is determined by the cooling coil which is inside. The heating coil (outside) connections are at the opposite end.

Water control packages are field-supplied.

# Unit selection criteria (general)

After room air conditioning loads have been calculated and the primary air quantity determined, the induction air terminals can be selected. To calculate coil loads for the units, the primary air cooling capacity is subtracted from the room load.

Primary air cooling capacity depends upon the exposure and type of system being designed. The air quantity should satisfy the ventilation and dehumidification requirements of the conditioned space as well as other system requirements. These system requirements are discussed in detail in the *Carrier System Design Manual*. Both this manual and the *Engineering Guide for Weathermaster® Induction Systems* should be consulted for a more complete explanation of system requirements.

When an induction air terminal is selected, 2 parameters must be satisfied: the unit must supply the air at an acceptable sound power level and it must have enough unit capacity to maintain the proper room temperature.

Two methods of selection are available: computerized and manual. Samples

**SOUND SELECTION GUIDE\***  
For Various NC Levels and Room Effects

NC LEVEL	ROOM EFFECT† ( $L_w - L_p$ )	NOZZLE PRESSURE (in. wg)				
		Unit Nozzle Arrangement				
		F	G	H	J	K
30	8 dB	2.4	2.2	2.0	1.8	1.5
<b>35</b>		<b>3.0</b>	<b>2.7</b>	<b>2.5</b>	<b>2.4</b>	<b>2.0</b>
40		3.5	3.5	3.2	3.1	2.6
45		3.5	3.5	3.5	3.5	3.5
30	10 dB	2.6	2.4	2.2	2.1	1.7
<b>35</b>		<b>3.3</b>	<b>3.1</b>	<b>2.9</b>	<b>2.7</b>	<b>2.3</b>
40		3.5	3.5	3.5	3.4	3.0
45		3.5	3.5	3.5	3.5	3.5

\*Based upon size 2 units with 1.5 in. wg damper drop.

†For 4000- and 8000-Hz center-band frequencies increased by 1 and 2 dB, respectively, over given value per Carrier Engineering Guide for Sound and Air Conditioned Space and the ASHRAE Guide and Data Books. This literature can also be referred to for NC level recommendations for specific applications. For unit sound power level data, refer to the unit application data literature.

NOTE: Boldface entries are the commonly accepted levels for an office space.

of the 2 selection methods are shown here. An Alternate Computer Evaluations (ACE) data service is available through your local Carrier representative. He should be consulted for detailed information regarding computerized selection of these units and other Carrier equipment.

## Alternate computer evaluations

### Selection Program

This method selects the best size and nozzle arrangement of an air terminal on the basis of cooling load and required sound level. It also provides alternate selections at slightly higher sound levels (3 dB or less) and at a slightly lower capacity (5% or less).

The computerized selection method can handle both changeover and non-changeover systems, 2-pipe and 4-pipe systems. It allows the user to set all specifications, i.e., cooling, induction heating and gravity heating requirements, nozzle pressure limits, water pressure drop limits, and sound limits. The sound limits can be specified as a noise criteria (NC) level with the appropriate room absorption effect ( $L_w - L_p$ ) or directly as sound power levels. Various room entering water and supply air temperature combinations can be tested to establish their effect on unit selection and total system cost.

Programs for computerized selection have their own input data form. This form can be obtained through your local Carrier representative.

### Performance Program

This method allows you to select the terminal and vary the parameters to find the best, most economical combinations.

### Program Limits

The following are the value limits which have been used in developing the 36 Series selection programs. Values outside these specified limits will be rejected by the computer.

ITEM	VALUE LIMITS	
	Minimum	Maximum
Primary Air Quantity (cfm)	0	250
Damper Pressure Drop (in. wg)	0	4.0
Nozzle Pressure Drop (in. wg)	0.5	4.0
Coil Water Pressure Drop (ft wg)	1.6	40.0
Total Cooling Load (Btuh)	0	14,000
Room Temperature (F)	0	100
Primary Air Temperature (F)	0	150
Water Temperature (F)	32	215
Transmission Heating Load (Btuh)	0	1,000,000
Gravity Heating Load (Btuh)	0	25,000

# Computer unit selection (sample)

## INPUT

<input type="radio"/>	10 A	Unit Identification	<input type="radio"/>
<input type="radio"/>	11 SV	Model Type	<input type="radio"/>
<input type="radio"/>	20 60	Primary Air Quantity	<input type="radio"/>
<input type="radio"/>	30 5645	Total Sensible Load	<input type="radio"/>
<input type="radio"/>	32 76	Room Temperature Cooling	<input type="radio"/>
<input type="radio"/>	33 52	Ent Water Temperature Cooling	<input type="radio"/>
<input type="radio"/>	34 56	Primary Air Temperature Cooling	<input type="radio"/>
<input type="radio"/>	40 5200	Transmission Heating Load	<input type="radio"/>
<input type="radio"/>	42 76	Room Temperature Induction Heating	<input type="radio"/>
<input type="radio"/>	44 50	Primary Air Temperature Induction Heating	<input type="radio"/>
<input type="radio"/>	51 3500	Coil Sensible Heating Load	<input type="radio"/>
<input type="radio"/>	52 60	Room Temperature Gravity Heating	<input type="radio"/>
<input type="radio"/>	60 35	Noise Criteria Level (NC)	<input type="radio"/>
<input type="radio"/>	71 8	Room Absorption Effect (Lw - Lp)	<input type="radio"/>
<input type="radio"/>	99 99	End of Problem Indicator	<input type="radio"/>
<input type="radio"/>	END		<input type="radio"/>

## OUTPUT

<input type="radio"/>	UNIT ID	A	<input type="radio"/>	
<input type="radio"/>	ALTERNATIVES	SPEC	<input type="radio"/>	
<input type="radio"/>	MODEL	36SV	<input type="radio"/>	
<input type="radio"/>	SIZE + NOZZLE	2-H	<input type="radio"/>	
<input type="radio"/>	P.A. CFM	60.0	<input type="radio"/>	
<input type="radio"/>	NOZZ. PD, IN	2.12	<input type="radio"/>	
<input type="radio"/>	WTR GPM	1.61	<input type="radio"/>	
<input type="radio"/>	WTR PD, FT	9.01	<input type="radio"/>	
<input type="radio"/>	INDUCTN CLNG		<input type="radio"/>	
<input type="radio"/>	CLNG CAP'Y	5645	<input type="radio"/>	
<input type="radio"/>	CAP'Y RATIO	1.000	<input type="radio"/>	
<input type="radio"/>	COIL CAP'Y	4349	<input type="radio"/>	
<input type="radio"/>	ROOM DB TEMP	76.0	<input type="radio"/>	
<input type="radio"/>	P.A. DB TEMP	56.0	<input type="radio"/>	
<input type="radio"/>	ENT WTR TEMP	52.0	<input type="radio"/>	
<input type="radio"/>	INDUCTN HTNG		<input type="radio"/>	
<input type="radio"/>	HTNG CAP'Y	5200	<input type="radio"/>	
<input type="radio"/>	ROOM DB TEMP	76.0	<input type="radio"/>	
<input type="radio"/>	ENT WTR TEMP	114.5	<input type="radio"/>	
<input type="radio"/>	GRAVITY HTNG		<input type="radio"/>	
<input type="radio"/>	HTNG CAP'Y	3500	<input type="radio"/>	
<input type="radio"/>	ROOM DB TEMP	60.0	<input type="radio"/>	
<input type="radio"/>	ENT WTR TEMP	154.2	<input type="radio"/>	
<input type="radio"/>	SOUND DB	250	45.7	<input type="radio"/>
<input type="radio"/>	RE 10 - 12	500	42.3	<input type="radio"/>
<input type="radio"/>	OCTAVE	1000	38.2	<input type="radio"/>
<input type="radio"/>	BAND	2000	35.7	<input type="radio"/>
<input type="radio"/>	MD-FR	4000	35.8	<input type="radio"/>
<input type="radio"/>	(HZ.)	8000	37.9	<input type="radio"/>
<input type="radio"/>	(LW-LP) + NC		8-35	<input type="radio"/>
<input type="radio"/>	ARI STD RATING POINT			<input type="radio"/>
<input type="radio"/>	CLNG CAP'Y		4030	<input type="radio"/>
<input type="radio"/>	P.A. CFM		50.5	<input type="radio"/>

# Manual unit selection (example)

**Cooling** — The cooling capacity of the induction unit is determined by the combined secondary coil and primary air cooling capacities at design conditions. In 4-pipe applications, the heating coil is assumed to be neutral for selection purposes.

## 1. Determine job requirements.

Given.

Type of unit . . . . . 36SV  
 Total room sensible cooling load . . . . . 5645 Btuh  
 Design room temperature ( $t_{rm}$ ) . . . . . 76 F  
 Entering primary air temperature ( $t_{pa}$ ) . . . . . 56 F  
 Minimum primary air quantity . . . . . 60 cfm  
 Entering water temperature . . . . . 52 F  
 Maximum desired room sound level  
 ( $L_w - L_p$ ) and NC . . . . . 8 and 35

## 2. Determine required primary air capacity. Subtract this capacity from total cooling load to determine required coil capacity.

Since the room temperature minus the primary air temperature (76 F - 56 F) is 20 F  $\Delta t$ , use the 36SV Cooling Coil Capacities table directly to read the capacity for 60 cfm of primary air

Primary air capacity at 60 cfm = 1296 Btuh  
 Required coil capacity = 5645 - 1296 = 4349 Btuh

Since the room temperature minus the entering water temperature (76 F - 52 F) is 24 F and the Cooling Coil Capacities table is based upon 25 F temperature difference, the required coil capacity must be corrected for the 24 F temperature difference.

Use formula

$$\text{Corrected coil capacity} = \frac{25}{24} \times 4349 = 4523 \text{ Btuh}$$

## 3. Determine unit size, water flow nozzle arrangement, and nozzle pressure.

Enter the 36SV Cooling Coil Capacities table at 60 cfm. Select a size 2H unit with a rated coil capacity 4469 Btuh. Since rated unit capacity is below that required, more than the table base 1.50 gpm is required. Coil Capacity Multipliers For Flow Rates table must be used. Required capacity must be divided by unit rating at 1.50 gpm to obtain a factor for use with this table.

$$\text{Factor} = \frac{4523}{4469} = 1.01$$

The table indicates that a flow rate of 1.60 gpm will be necessary to obtain the required capacity. Nozzle pressure is 2.11 in. wg.

## 4. Select unit size to meet sound level requirements specified. Refer to Sound Selection Guide table. Verify that nozzle pressure of selected unit is acceptable from a sound standpoint. Since maximum desired room sound level at ( $L_w - L_p$ ) and NC is 8 and 35, an H nozzle arrangement has a maximum allowable nozzle pressure of 2.50 in. wg. Selected unit will be satisfactory.

## 5. Final selection, therefore, is a 36SV-2H unit.

**Heating** — The total heating load required is the combined room heating load (transmission) and the load required to temper the primary air to room temperature (primary air heating load). In 4-pipe applications, assume the cooling coil is neutral.

## 1. Determine job requirements for unit selected.

Given

Room heating load (transmission) . . . . . 5200 Btuh  
 Design room temperature ( $t_{rm}$ ) . . . . . 76 F  
 Design primary air temperature ( $t_{pa}$ ) . . . . . 50 F  
 Primary air quantity . . . . . 60 cfm  
 Entering water flow . . . . . 1.60 gpm  
 Unit selected for cooling . . . . . 36SV-2H

## 2. Determine primary air heating load. Use formula

$$\text{Primary air heating load (Btuh)} = \text{cfm} \times 1.08 \times (t_{rm} - t_{pa})$$

$$\text{Primary air heating load} = 60 \times 1.08 \times (76 - 50)$$

$$\text{Primary air heating load} = 1685 \text{ Btuh}$$

## 3. Determine total unit heating load. Use formula

$$\text{Unit heating load (Btuh)} = \text{primary air heating load} + \text{room heating load}$$

$$\text{Unit heating load} = 1685 + 5200$$

$$\text{Unit heating load} = 6885 \text{ Btuh}$$

## 4. Determine entering water temperature required to meet required total heating load. Use formulas

$$\text{Total heating load} = \left( \frac{t_{ew} - t_{rm}}{25} \right) \times \text{corr coil rating at 25 F } \Delta t$$

$$t_{ew} = t_{rm} + \left( \frac{\text{total heating load}}{\text{corr coil rating at 25 F } \Delta t} \right) \times 25$$

$$t_{ew} = 76 + \frac{6885}{4469} \times 25 = 114.5 \text{ F}$$

## Gravity heating

### 1. Determine job requirements.

Given

Gravity heating load . . . . . 3500 Btuh  
 Design room temperature (during shutdown) . . . 60 F

### 2. Adjust load to coil water flow rate. Since the Gravity Heating Capacities table is based upon 1.50 gpm and the coil has a gpm of 1.60, the load must be adjusted to an equivalent 1.50 gpm to use the table. Use the following formula

$$\text{Corrected heating load} = \frac{\text{actual heating load}}{\text{correction factor}}$$

$$\text{Corrected heating load} = \frac{3500}{1.03} = 3400$$

### 3. Determine entering water temperature required to meet required gravity heating load. From the 36SV Gravity Heating Capacities table, read the temperature difference for the selected unit at the required capacity. By interpolation, the temperature difference for a 36SV-2H unit with a gravity heating capacity of 3400 Btuh is 93.6 F. Use formula

$$t_{ew} = \text{temperature difference} + \text{design room temperature}$$

$$t_{ew} = 93.6 + 60 = 153.6 \text{ F}$$



# Performance data

## 36S SERIES COIL CAPACITY MULTIPLIERS FOR FLOW RATES

GPM	NOZZLE ARRANGEMENT																			
	F				G				H				J				K			
	Unit Size																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
0.6	0.91	0.90	0.85	0.82	0.88	0.85	0.82	0.79	0.85	0.84	0.80	0.77	0.83	0.82	0.78	0.76	0.84	0.82	0.78	0.76
0.8	0.94	0.92	0.90	0.88	0.91	0.89	0.86	0.84	0.90	0.88	0.85	0.83	0.87	0.85	0.83	0.81	0.89	0.86	0.83	0.80
1.0	0.96	0.95	0.94	0.93	0.95	0.93	0.92	0.91	0.94	0.93	0.91	0.90	0.93	0.92	0.90	0.89	0.93	0.92	0.90	0.88
1.2	0.98	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.97	0.96	0.96	0.95	0.96	0.96	0.95	0.94	0.96	0.96	0.95	0.94
1.4	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.99	0.99	0.99	0.98
1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.6	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02
1.8	1.02	1.02	1.02	1.03	1.02	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.03	1.04	1.04	1.04	1.03	1.03	1.04	1.04
2.0	1.03	1.03	1.04	1.04	1.04	1.04	1.05	1.05	1.04	1.05	1.05	1.06	1.04	1.05	1.06	1.06	1.04	1.05	1.06	1.07
2.2	1.04	1.05	1.05	1.06	1.04	1.05	1.06	1.06	1.05	1.06	1.07	1.07	1.05	1.06	1.07	1.08	1.05	1.06	1.07	1.08

NOTE: For capacities at other than 1.50 gpm, multiply capacities from Cooling Coil Capacities table by above multipliers.

### COIL WATER PRESSURE DROP (ft water)

GPM									
0.60	0.80	1.00	1.20	1.40	1.50	1.60	1.80	2.00	2.20
1.60	2.70	3.90	5.40	7.20	8.00	9.00	11.00	13.40	15.70

NOTE: Table shows single coil pressure drops, all units, except 36ST. For 36ST at the same gpm, multiply above values by 2.

### ACCESSORY LINT SCREENS (in.)\*

LOCATION	UNIT SIZE				36 - UNIT TYPE
	1	2	3	4	
Directly On Coil	25½ x 10	33 x 10	41 x 10	53 x 10	All Models
Over Return Air Grille	x 11½				43 x 11½ 51 x 11½ 63 x 11½ SH, SJ only

\*14 x 18 mesh; 1/2 in. thick.

### ARI CERTIFIED STANDARD RATINGS

SIZE AND NOZZLE	PRIMARY AIR FLOW (Cfm)	COOLING CAPACITY (Btuh)						
		36SV,SH	36SL	36SC	36ST	36SD,SJ	36SM	36SP
1F	19.4	1960	2060	2510	2720	1770	1940	2360
2F	25.3	2600	2730	3330	3600	2340	2570	3130
3F	31.1	3290	3460	4220	4570	2960	3250	3970
4F	40.8	4210	4430	5390	5840	3790	4160	5070
1G	27.2	2570	2650	3180	3500	2320	2440	2930
2G	35.4	3370	3450	4140	4550	3030	3170	3810
3G	43.5	4220	4330	5180	5710	3800	3980	4770
4G	57.1	5330	5460	6550	7210	4800	5020	6030
1H	38.9	3090	3090	3650	4080	2790	2780	3290
2H	50.5	4030	4030	4740	5310	3620	3630	4270
3H	62.2	5010	5010	5910	6620	4510	4510	5320
4H	81.6	6330	6330	7460	8350	5700	5700	6710
1J	50.8	3380	3290	3780	4340	3040	2900	3330
2J	64.9	4350	4240	4870	5590	3910	3730	4290
3J	81.3	5380	5230	6000	6890	4840	4600	5280
4J	105.5	6730	6560	7550	8660	6050	5770	6640
1K	62.8	3590	3410	3850	4500	3230	2900	3270
2K	81.6	4610	4370	4930	5770	4150	3710	4190
3K	100.5	5680	5380	6070	7100	5110	4570	5160
4K	131.9	7100	6740	7610	8900	6390	5730	6470

### APPROXIMATE UNIT OPERATING WEIGHTS (lbs)

MODEL 36	UNIT SIZE			
	1	2	3	4
SL	18	23	28	35
SC	29	37	45	58
ST	32	40	49	63
SV	28	37	43	54
SH	33	42	49	61
SM	23	28	35	44
SP	34	42	52	67
SD	34	44	52	66
SJ	38	48	56	70

NOTE: Weights include water in the coil but do not include field-supplied control valve packages.

### 36SL,SC,SV,SH APPROXIMATE COIL WATER QUANTITIES

UNIT SIZE	1	2	3	4
GALLONS	0.13	0.17	0.21	0.26
LBS	1.10	1.40	1.70	2.20

NOTE: For 36ST, SM, SP, SJ, and SD values, double the values shown in the table.



Units are rated in accordance with ARI Standard 445-66, under the following conditions: 1.5 gpm of 50 F water, 8-ft water pressure drop thru coil (16-ft for 36ST), 75 F db and 57 F wb air entering coil, 1.5 in. wg nozzle static pressure

# 36SL loboy unit (2-pipe)

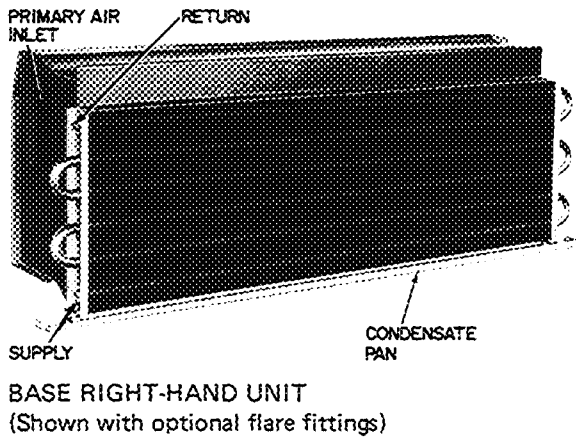
The 36SL in its standard enclosure measures only about 12 inches high and 10 inches deep. The base unit is shipped from the factory with the following

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **drain pan**, assembled ready for wall mounting
- **removable plenum end plug**, located in one of the primary air inlets

- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- **speed nuts**, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10–24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



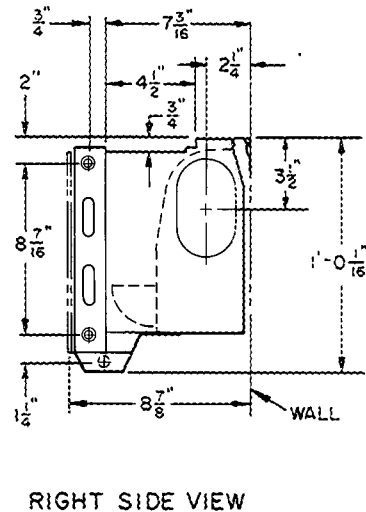
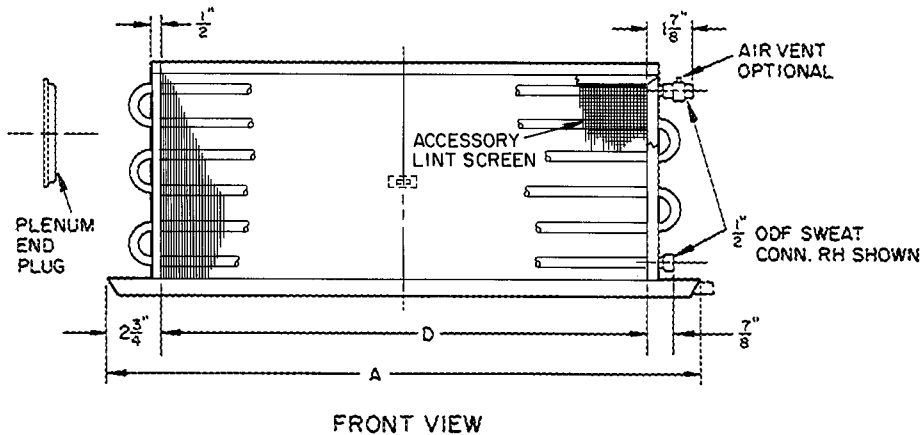
### GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	3780	3150	2550	1955	1385
2	5040	4200	3400	2605	1845
3	6300	5250	4255	3260	2310
4	8190	6825	5530	4235	3000

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	29½	37½	45½	57½
D	24¼	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	124	165	206	269

This is not a certified print. Certified dimensions available upon request.



# Performance data

## 36SL COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR		NOZZLE ARRANGEMENT																			
Cfm	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89 1614																			
20	432	1.59 2123	0.94 2185			0.81 2151															
25	540	2.48 2626	1.47 2702	0.97 2752		1.26 2504	0.74 2735														
30	648	3.57 3125	2.11 3215	1.39 3274		1.82 2836	1.07 3098	0.71 3308		0.89 2639											
35	756		2.88 3724	1.90 3792	1.10 3772	2.48 3151	1.46 3441	0.97 3675		1.21 2902	0.71 3204										
40	864		3.76 4229	2.48 4306	1.44 4284	3.24 3451	1.91 3770	1.26 4025	0.73 4267	1.58 3152	0.94 3479				0.92 2867						
45	972		3.14 4818	1.82 4793		2.42 4085	1.60 4362	0.93 4624	2.01 3389	1.19 3742	0.78 4030		1.17 3058	0.72 3466							
50	1080		3.88 5326	2.25 5299		2.99 4390	1.97 4687	1.14 4968	2.48 3617	1.46 3993	0.96 4300	0.56 4612	1.45 3241	0.89 3673				0.95 3011			
55	1188			2.72 5803		3.62 4685	2.39 5002	1.39 5302	3.00 3836	1.77 4235	1.17 4561	0.68 4892	1.75 3415	1.07 3871	0.68 4182						
60	1296			3.24 6304			2.85 5308	1.65 5626	3.57 4048	2.11 4469	1.39 4812	0.81 5162	2.09 3582	1.28 4060	0.81 4387					1.36 3305	0.81 3742
65	1405			3.80 6804			3.34 5606	1.94 5942		2.48 4695	1.63 5056	0.95 5423	2.45 3743	1.50 4243	0.95 4584					1.60 3444	0.95 3898
70	1512						3.88 5897	2.25 6250		2.87 4915	1.90 5293	1.10 5677	2.84 3899	1.74 4419	1.11 4775					1.86 3577	1.10 4049
75	1620							2.58 6552		3.30 5128	2.18 5523	1.26 5924	3.26 4050	2.00 4590	1.27 4959	0.75 5446				2.13 3706	0.83 4195
80	1730							2.94 6847		3.76 5337	2.48 5747	1.44 6164	3.71 4196	2.27 4756	1.45 5138	0.86 5643				2.43 3830	1.44 4336
85	1838							3.32 7136		2.80 5966	1.62 6399		2.57 4917	1.63 5312	0.97 3951	2.74 4473	1.62 4914				1.07 4473
90	1942							3.72 7419		3.14 6181	1.82 6629		2.88 5074	1.83 5482	3.08 6020	3.08 4069	1.82 4606	1.20 5060	0.69 5572		
95	2055									3.50 6390	2.03 6854		3.21 5227	2.04 5647	1.21 6202	3.43 4183	2.03 4735	1.34 5203	0.77 5729		
100	2160									3.87 6596	2.25 7074		3.56 5376	2.26 5809	1.34 6379	3.80 4295	2.25 4862	1.48 5341	0.86 5881		
105	2265									2.48 7290			3.92 5523	2.50 5967	1.48 6552		2.48 4985	1.63 5476	0.95 6030		
110	2375									2.72 7503			2.74 6121	1.63 6722		2.72 5105	1.79 5609	1.04 6176			
115	2482									2.97 7711			2.99 6272	1.78 6888		2.97 5223	1.96 5738	1.14 6318			
120	2590									3.24 7917			3.26 6421	1.94 7051		3.24 5338	2.13 5864	1.24 6457			
125	2700									3.51 8119			3.51 6567	2.10 7211		3.51 5451	2.32 5988	1.34 6594			
130	2810									3.80 8317			3.83 6710	2.27 7369		3.80 5561	2.51 6110	1.45 6728			
135	2918													2.45 7523			2.70 6229	1.57 6859			
140	3022													2.64 7675			2.91 6346	1.69 6988			
145	3130													2.83 7824			3.12 6462	1.81 7115			
150	3240													3.03 7972			3.34 6575	1.94 7240			
155	3350													3.23 8116			3.56 6686	2.07 7363			
160	3460													3.44 8259			3.80 6796	2.20 7483			
165	3565													3.66 8400				2.34 7602			
170	3675													3.89 8539				2.49 7719			

**Boldface italics** indicate nozzle pressure (in wg).

Ratings based on:

25 Δt, 1 50 gpm, 8-ft water coil pressure drop (all sizes)

Δt =  $t_{rm} - t_{ew}$

where,  $t_{rm}$  = room temperature

$t_{ew}$  = ent water temperature

All ratings include allowance for lint screen

NOTES:

1 Coil capacity for other than 25 F Δt

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at } 25 \text{ F } \Delta t$$

2 See Coil Capacity Multipliers For Flow Rates table for capacities other than 1 50 gpm.

3 To facilitate balanced water systems, all units, regardless of size, have the same pressure drop

# 36SC vertical unit with recovery stack (2-pipe)

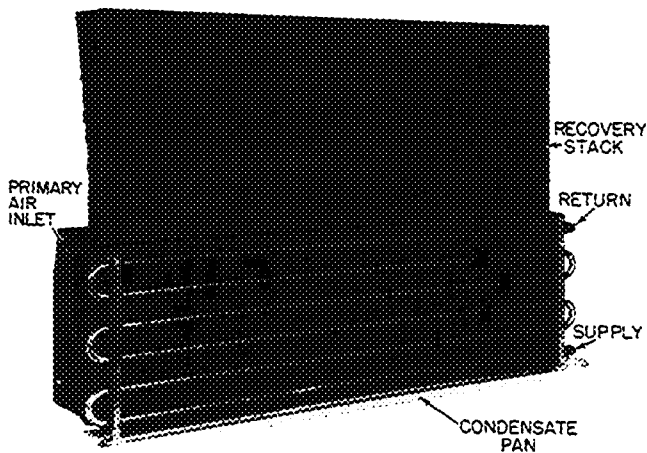
The 36SC in its standard enclosure measures 25 inches high and 10 inches deep. The base unit is the standard 36SL with an added recovery stack. The stack increases unit coil capacity with reduced sound power levels. The unit is shipped from the factory with the following

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **recovery stack and drain pan**, assembled ready for wall mounting

- **removable plenum end plug**, located in one of the primary air inlets
- **two lint screen clips**, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- **speed nuts**, located in the back flange on each end of the plenum with two 10–24 bolts for leveling the unit.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



**BASE RIGHT-HAND UNIT**  
(Shown with optional flare fittings)

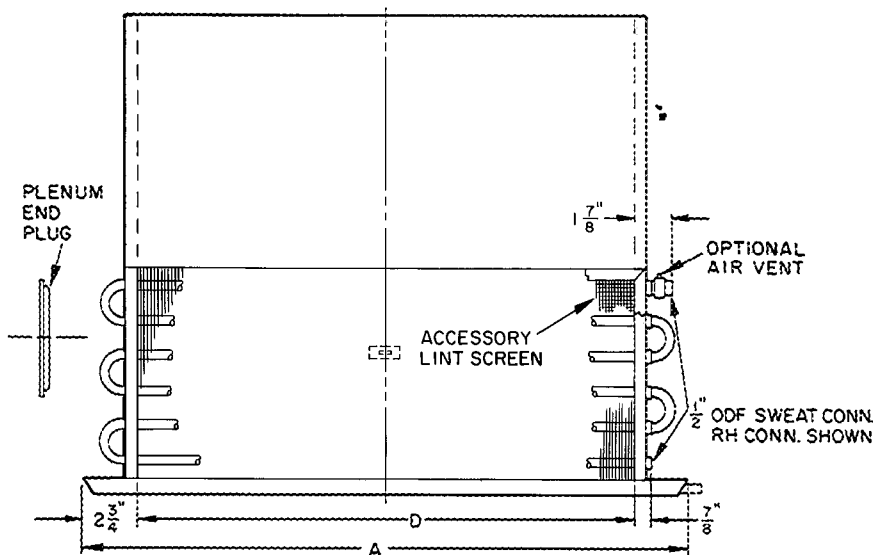
This is not a certified print. Certified dimensions available upon request.

### GRAVITY HEATING CAPACITIES (Btuh)

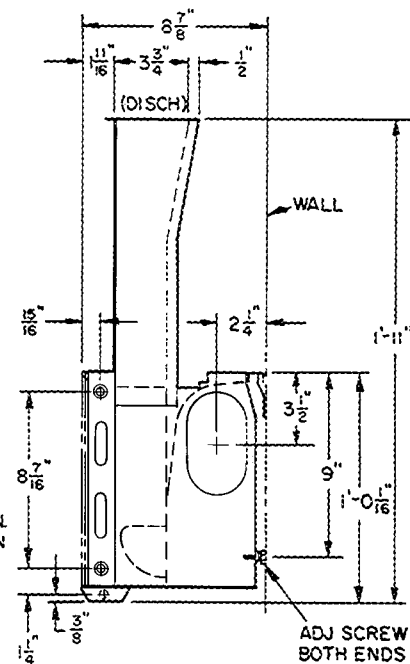
UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	5555	4630	3750	2875	2035
2	7410	6175	5000	3830	2715
3	9260	7715	6250	4790	3395
4	12,035	10,030	8125	6225	4410

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	29½	37½	45½	57½
D	24¾	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	237	315	394	512



FRONT VIEW



RIGHT SIDE VIEW

# Performance data

## 36SC COOLING COIL CAPACITIES (Btuh)

Cfm	PRIMARY AIR Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																			
		F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
15	324	0.89																			
20	432	1.59	0.94			0.81															
25	540	2.48	1.47	0.97		1.26	0.74														
30	648	3.57	2.11	1.39		1.82	1.07	0.71		0.89											
35	756	4.54	2.88	1.90	1.10	2.48	1.46	0.97		1.21	0.71										
40	864	5.15	3.76	2.48	1.44	3.24	1.91	1.26	0.73	1.58	0.94			0.92							
45	972		3.14	1.82		2.42	1.60	0.93	2.01	1.19	0.78		1.17	0.72							
50	1080		5878	5847		4902	5235	5548	4000	4415	4755		3516	3986							
55	1188		3.88	2.25		2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89			0.95				
60	1296		6498	6465		5268	5625	5962	4268	4712	5075	5443	3726	4223			3404				
65	1405			2.72		3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68		1.15				
70	1512			7079		5622	6003	6363	4527	4997	5382	5772	3926	4450	4808		3574				
75	1620			3.24			2.85	1.65	3.57	2.11	1.39	0.81	2.09	1.28	0.81		1.36				
80	1730			7691			6370	6752	4777	5273	5679	6091	4119	4668	5044		3737				
85	1838			3.80			3.34	1.94		2.48	1.63	0.95	2.45	1.50	0.95		3893				
90	1942			8301			6728	7131		5540	5966	6399	4304	4878	5271		4407				
95	2055						3.88	2.25		3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43				
100	2160						7077	7501		5799	6246	6699	4483	5081	5490		4578				
105	2265							2.58		3.30	2.18	1.26	3.26	2.00	1.27	0.75	2.13				
110	2375							7862		6051	6517	6990	4656	5278	5702	6262	4190				
115	2482							2.94		3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43				
120	2590							8216		6297	6782	7274	4824	5468	5908	6488	4331				
125	2700																				
130	2810																				
135	2918																				
140	3022																				
145	3130																				
150	3240																				
155	3350																				
160	3460																				
165	3565																				
170	3675																				

*Boldface italics* indicate nozzle pressure (in wg)

Ratings based on

25 Δt, 1 50 gpm, 8-ft water coil pressure drop (all sizes)

Δt = t<sub>rm</sub> - t<sub>ew</sub>

where, t<sub>rm</sub> = room temperature

t<sub>ew</sub> = ent water temperature

All ratings include allowance for lint screen

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1 50 gpm

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

# 36ST vertical high-capacity unit (2-pipe)

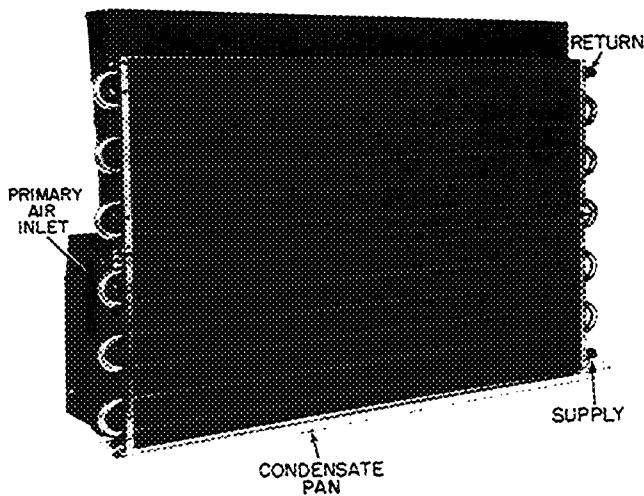
The 36ST in its standard enclosure measures 25 inches high and 10 inches deep. This unit provides the highest capacity per cfm of primary air of any model. It is shipped from the factory with the following:

- plenum
- one 12-tube coil, with copper tubes and aluminum fins
- recovery stack and drain pan, assembled and ready for wall mounting

- removable plenum end plug, located in one of the primary air inlets.
- four lint screen clips, taped to the bottom of the drain pan, to attach two accessory lint screens to the coil.
- speed nuts, located on the back flange on each end of the plenum, with 10–24 bolts for leveling the unit.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. Two accessory lint screens and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



BASE RIGHT-HAND UNIT  
(Shown with optional flare fittings)

### GRAVITY HEATING CAPACITIES (Btuh)

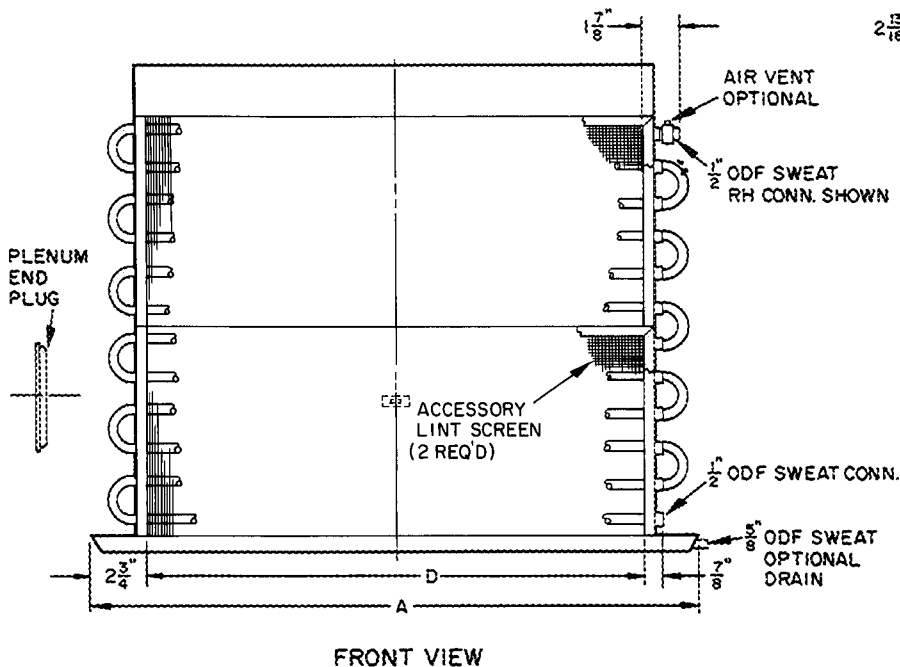
UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)				
	140	120	100	80	60
1	7080	5900	4780	3660	2595
2	9440	7865	6370	4880	3460
3	11,800	9835	7970	6105	4325
4	15,340	12,785	10,360	7935	5620

**NOTE:**

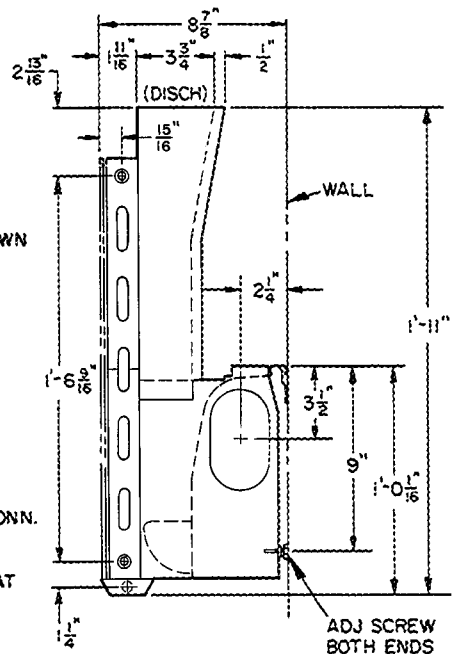
For capacities other than 1.50 gpm, use the following multipliers — 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	29½	37½	45½	57½
D	24¾	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	473	630	788	1023

This is not a certified print. Certified dimensions available upon request.



FRONT VIEW



RIGHT SIDE VIEW

# Performance data

## 36ST COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR	NOZZLE ARRANGEMENT																				
	Cap. 20 F Δt (Btuh)	F				G				H				J				K			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Cfm	Unit Size																				
15	324	0.89 2131																			
20	432	1.59 2803	0.94 2884			0.81 2839															
25	540	2.48 3467	1.47 3567	0.97 3632		1.26 3306	0.74 3611														
30	648	3.57 4125	2.11 4244	1.39 4321		1.82 3744	1.07 4089	0.71 4367		0.89 3484											
35	756	4.915	2.88 5005	1.90 4979	1.10 4159	2.48 4543	1.46 4851	0.97 4851		1.21 3831	0.71 4230										
40	864	5.582	3.76 5582	2.48 5684	1.44 5655	3.24 4556	1.91 4976	1.26 5314	0.73 5632	1.58 4160	0.94 4593			0.92 3784							
45	972		3.14 6359	1.82 6326		2.42 5393	1.60 5758	0.93 6103	2.01 4474	1.19 4939	0.78 5319		1.17 4037	0.72 4576							
50	1080		3.88 7031	2.25 6995		2.99 5795	1.97 6188	1.14 6558	2.48 4775	1.46 5271	0.96 5677	0.56 6088	1.45 4278	0.89 4849			0.95 3974				
55	1188			2.72 7660		3.62 6184	2.39 6603	1.39 6999	3.00 5064	1.77 5590	1.17 6021	0.68 6457	1.75 4508	1.07 5109	0.68 5520		1.15 4173				
60	1296			3.24 8332		2.85 7007	1.65 7427	3.57 5343	2.11 5899	1.39 6353	0.81 6813	2.09 4729	1.28 5360	0.81 5791		1.36 4363	0.81 4939				
65	1405			3.80 8981		3.34 7400	1.94 7844		2.48 6197	1.63 6674	0.95 7158	2.45 4941	1.50 5601	0.95 6051		1.60 4546	0.95 5146				
70	1512					3.88 7784	2.25 8251		2.87 6487	1.90 6987	1.10 7493	2.84 5147	1.74 5834	1.11 6303		1.86 4722	1.10 5345	0.72 5873			
75	1620						2.58 8648		3.30 6769	2.18 7290	1.26 7819	3.26 5346	2.00 6059	1.27 6546	0.75 7189	2.13 4892	1.26 5538	0.83 6084			
80	1730						2.94 9038		3.76 7045	2.48 7587	1.44 8137	3.71 5539	2.27 6278	1.45 6783	0.86 7449	2.43 5056	1.44 5724	0.95 6289			
85	1838						3.32 9419		2.80 7876	1.62 8447		2.57 6491	1.63 7012	0.97 7701	2.74 5216	1.62 5905	1.07 6487				
90	1942						3.71 9794		3.14 8159	1.82 8750		2.88 6698	1.83 7236	1.09 7947	3.08 5371	1.82 6080	1.20 6680	0.69 7356			
95	2055								3.50 8435	2.03 9047		3.21 6900	2.04 7455	1.21 8187	3.43 5522	2.03 6251	1.34 6868	0.77 7562			
100	2160								3.87 8707	2.25 9338		3.56 7097	2.26 7668	1.34 8421	3.80 5669	2.25 6417	1.48 7050	0.86 7764			
105	2265								2.48 9624			3.92 7290	2.50 7876	1.48 8649	2.48 6580	1.63 7229	0.95 7960				
110	2375								2.72 9904			2.74 8080	1.63 8873	2.72 6739	1.79 7403	1.04 8152					
115	2482								2.97 10179			2.99 8280	1.78 9093	2.97 6894	1.96 7574	1.14 8340					
120	2590								3.24 10450			3.26 8476	1.94 9308	3.24 7046	2.13 7741	1.24 8524					
125	2700										3.51 10717		3.54 8668	2.10 9519	3.51 7195	2.32 7905	1.34 8704				
130	2810										3.80 10979		3.83 8857	2.27 9727	3.80 7341	2.51 8065	1.45 8881				
135	2918																2.70 8223	1.57 9054			
140	3022																2.91 8377	1.69 9225			
145	3130																3.12 8529	1.81 9392			
150	3240																3.34 8679	1.94 9557			
155	3350																3.56 8826	2.07 9719			
160	3460																3.80 8971	2.20 9878			
165	3565																	2.34 10035			
170	3675																	2.49 10190			

*Boldface italics* indicate nozzle pressure (in wg)  
 Ratings based on:  
 25 Δt, 1 50 gpm, 16-ft water coil pressure drop (all sizes)  
 Δt = t<sub>rm</sub> - t<sub>ew</sub>  
 where, t<sub>rm</sub> = room temperature  
 t<sub>ew</sub> = ent water temperature  
 All ratings include allowance for lint screen

### NOTES

1 Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2 See Coil Capacity Multipliers For Flow Rates table for capacities other than 1 50 gpm.

3 To facilitate balanced water systems, all units, regardless of size, have the same pressure drop

# 36SV standard vertical unit (2-pipe)

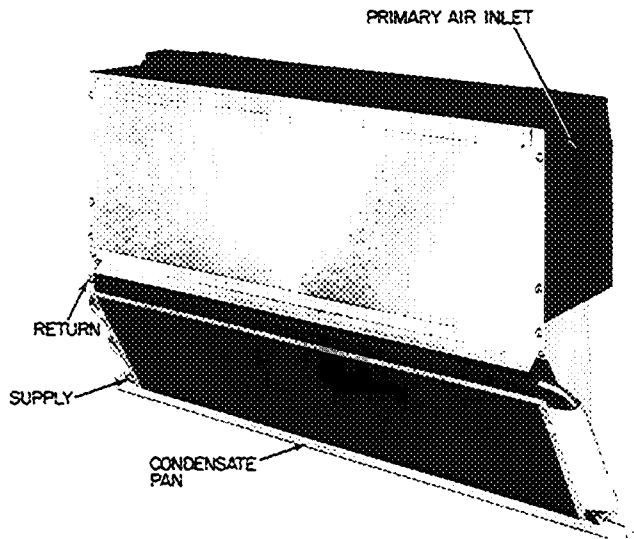
The 36SV in its standard enclosure measures 22 inches high and 8 inches deep. The unit is shipped from the factory with the following

- plenum
- one 6-tube coil, with copper tubes and aluminum fins
- drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil.
- speed nuts, located in the back flange on each end of the plenum for leveling the unit with 10–24 field-supplied bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## Dimensions and physical data



### GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)				
	140	120	100	80	60
1	4080	3400	2755	2110	1495
2	5440	4535	3675	2815	1995
3	6800	5665	4590	3515	2495
4	8840	7365	5965	4570	3240

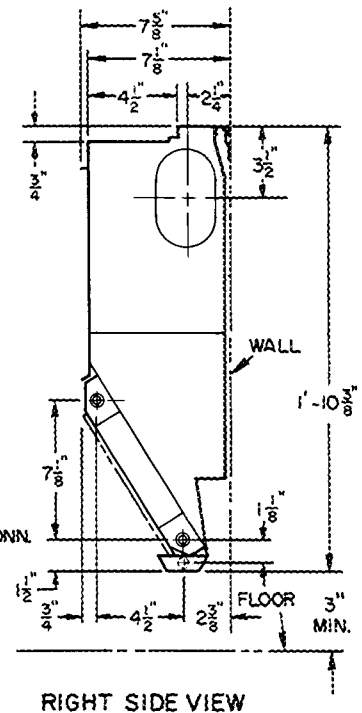
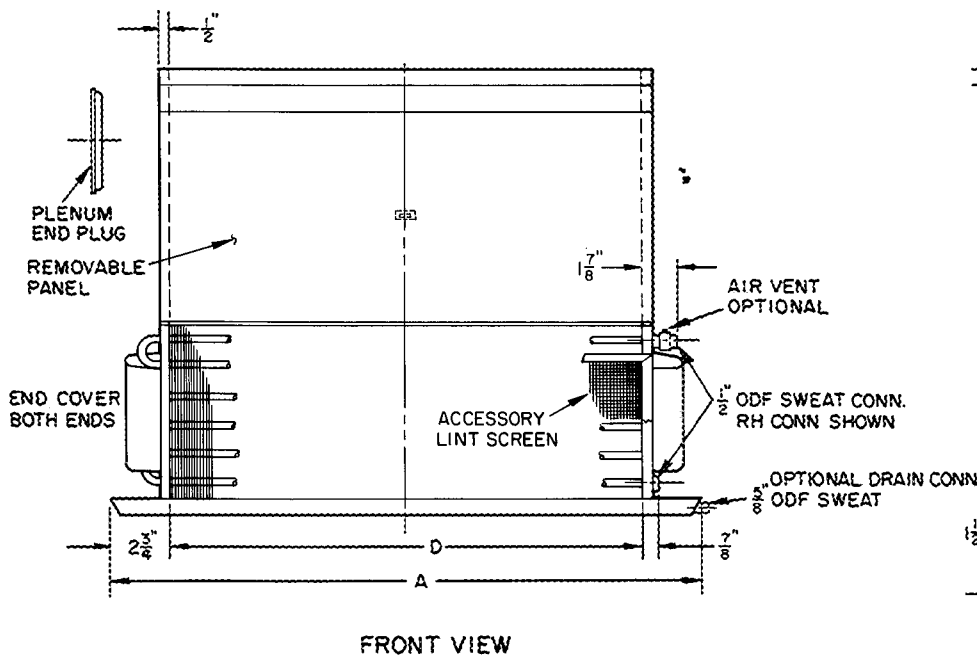
NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm, 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
Dimensions (in.)	A 29 1/2 D 24 3/8	37 1/2 32	45 1/2 40	57 1/2 52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	234	288	343	439

### BASE LEFT-HAND UNIT

(Shown with optional flare fittings and accessory lint screen)

This is not a certified print. Certified dimensions available upon request.





# Performance data

## 36SV COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR	Cfm	Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																			
			F				G				H				J				K			
			Unit Size																			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89 1537																				
20	432	1.59 2022	0.94 2080			0.81 2098																
25	540	2.48 2501	1.47 2573	0.97 2620		1.26 2443	0.74 2669															
30	648	3.57 2976	2.11 3062	1.39 3118		1.82 2767	1.07 3022	0.71 3227		0.89 2639												
35	756		2.88 3546	1.90 3611	1.10 3592	2.48 3074	1.46 3357	0.97 3585		1.21 2902	0.71 3204											
40	864		3.76 4028	2.48 4101	1.44 4080	3.24 3367	1.91 3678	1.26 3927	0.73 4163	1.58 3152	0.94 3479				0.92 2940							
45	972			3.14 4588	1.82 4564		2.42 3986	1.60 4256	0.93 4511	2.01 3389	1.19 3742	0.78 4030			1.17 3137	0.72 3555						
50	1080			3.88 5073	2.25 5046		2.99 4283	1.97 4573	1.14 4847	2.48 3617	1.46 3993	0.96 4300	0.56 4612	1.45 3324	0.89 3767				0.95 3169			
55	1188				2.72 5526		3.62 4570	2.39 4880	1.39 5173	3.00 3836	1.77 4235	1.17 4561	0.68 4892	1.75 3503	1.07 3970	0.68 4289				1.15 3328		
60	1296				3.24 6004			2.85 5179	1.65 5489	3.57 4048	2.11 4469	1.39 4812	0.81 5162	2.09 3674	1.28 4164	0.81 4499				1.36 3479	0.81 3939	
65	1405							3.34 5470	1.94 5797		2.48 4695	1.63 5056	0.95 5423	2.45 3839	1.50 4352	0.95 4702				1.60 3625	0.95 4104	
70	1512							2.25 6098	2.87 4915	1.90 5293	1.10 5677	2.84 3999	1.74 4533	1.11 4897					1.86 3765	1.10 4263	0.72 4683	
75	1620							2.58 6392	3.30 5128	2.18 5523	1.26 5924	3.26 4154	2.00 4708	1.27 5086	0.75 5586				2.13 3901	1.26 4416	0.83 4852	
80	1730							2.94 6680	3.76 6164	2.48 5337	1.44 4304	3.71 4304	2.27 4878	1.45 5270	0.86 5788	2.43 4032	1.44 4564	0.95 5015				
85	1838							3.32 6962			2.80 5966	1.62 6399		2.57 5043	1.63 5449	0.97 5984	2.74 4159	1.62 4709	1.07 5173			
90	1942										3.14 6181	1.82 6629		2.88 5204	1.83 5622	1.09 6175	3.08 4283	1.82 4849	1.20 5327	0.69 5866		
95	2055										3.50 6390	2.03 6854		3.21 5361	2.04 5792	1.21 6361	3.43 4403	2.03 4985	1.34 5476	0.77 6030		
100	2160										2.25 7074			3.56 5514	2.26 5958	1.34 6543	3.80 4521	2.25 5118	1.48 5622	0.86 6191		
105	2265										2.48 7290			3.92 5664	2.50 6120	1.48 6721		2.48 5247	1.63 5765	0.95 6348		
110	2375										2.72 7503				2.74 6278	1.63 6895		2.72 5374	1.79 5904	1.04 6501		
115	2482										2.97 7711				2.99 6433	1.78 7065		2.97 5498	1.96 6040	1.14 6651		
120	2590										3.24 7917				3.26 6586	1.94 7232		3.24 5619	2.13 6173	1.24 6797		
125	2700										3.51 8119				3.54 6735	2.10 7396		3.51 5738	2.32 6303	1.34 6941		
130	2810														2.27 7558		3.80 5854	2.51 6431	1.45 7082			
135	2918														2.45 7716			2.70 6557	1.57 7220			
140	3022														2.64 7872			2.91 6680	1.69 7356			
145	3130														2.83 8025			3.12 6802	1.81 7490			
150	3240														3.03 8176			3.34 6921	1.94 7621			
155	3350														3.23 8325			3.56 7038	2.07 7750			
160	3460														3.44 8471			3.80 7154	2.20 7877			
165	3565																		2.34 8002			
170	3675																		2.49 8126			

*Boldface Italics* indicate nozzle pressure (in. wg).

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes)

$\Delta t = t_{rm} - t_{ew}$

where,  $t_{rm}$  = room temperature

$t_{ew}$  = ent water temperature

All ratings include allowance for lint screen.

NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

# 36SH standard horizontal unit (2-pipe)

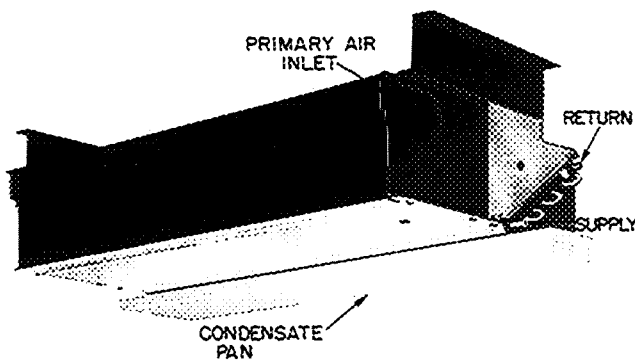
The 36SH in its standard enclosure measures 12 inches deep. The unit is shipped from the factory with the following.

- **plenum**
- **one 6-tube coil**, with copper tubes and aluminum fins
- **drain pan**, assembled
- **two Z brackets** for mounting unit to a rigid flat horizontal surface
- **removable plenum end plug**, located in one of the primary air inlets

- **two screws and a lint clip**, taped to the front panel of the unit, to attach an accessory lint screen to the coil (with enclosure models, the lint screen can be attached to the recirculation grille for easy accessibility).
- **two standard lint screen offerings**, on coil face or on recirculation grille.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories for optional drain connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

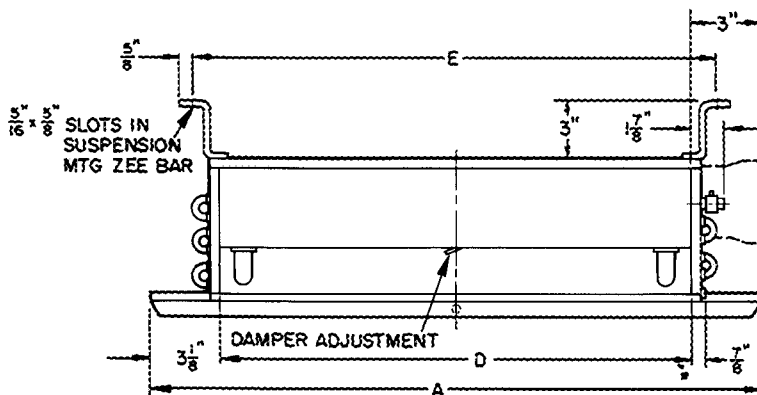
## → Dimensions and physical data



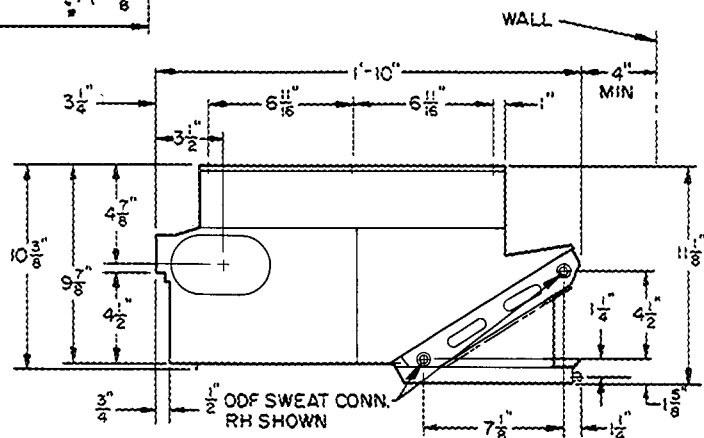
UNIT SIZE	1	2	3	4
Dimensions (in.)				
A	30 $\frac{3}{4}$	38 $\frac{3}{4}$	46 $\frac{3}{4}$	58 $\frac{3}{4}$
D	24 $\frac{3}{4}$	32	40	52
E	27	34 $\frac{1}{8}$	42 $\frac{3}{8}$	54 $\frac{3}{8}$
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	234	288	343	439

BASE RIGHT-HAND UNIT  
(Shown with optional flare fittings and 2-in. brackets attached.)

This is not a certified print. Certified dimensions available upon request.



FRONT VIEW



RIGHT SIDE VIEW

# Performance data

## 36SH COOLING COIL CAPACITIES (Btuh)

Cfm	PRIMARY AIR Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																			
		F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89																			
		1537																			
20	432	1.59	0.94		0.81																
		2022	2080		2098																
25	540	2.48	1.47	0.97	1.26	0.74															
		2501	2573	2620	2443	2669															
30	648	3.57	2.11	1.39	1.82	1.07	0.71		0.89												
		2976	3062	3118	2767	3022	3227		2639												
35	756		2.88	1.90	1.10	2.48	1.46	0.97	1.21	0.71											
			3546	3611	3592	3074	3357	3585	2902	3204											
40	864		3.76	2.48	1.44	3.24	1.91	1.26	0.73	1.58	0.94			0.92							
			4028	4101	4080	3367	3678	3927	4163	3152	3479			2940							
45	972		3.14	1.82		2.42	1.60	0.93	2.01	1.19	0.78		1.17	0.72							
			4588	4564		3986	4256	4511	3389	3742	4030		3137	3555							
50	1080		3.88	2.25		2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89			0.95				
			5073	5046		4283	4573	4847	3617	3993	4300	4612	3324	3767			3169				
55	1188			2.72		3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68		1.15				
				5526		4570	4880	5173	3836	4235	4561	4892	3503	3970	4289		3328				
60	1296			3.24			2.85	1.65	3.57	2.11	1.39	0.81	2.09	1.28	0.81		1.36	0.81			
				6004			5179	5489	4048	4469	4812	5162	3674	4164	4499		3479	3939			
65	1405						3.34	1.94		2.48	1.63	0.95	2.45	1.50	0.95		1.60	0.95			
							5470	5797		4695	5056	5453	3839	4352	4702		3625	4104			
70	1512							2.25		2.87	1.90	1.10	2.84	1.74	1.11		1.86	1.10	0.72		
								6098		4915	5293	5677	3999	4533	4897		3765	4263	4683		
75	1620							2.58		3.30	2.18	1.26	3.26	2.00	1.27	0.75	2.13	1.26	0.83		
								6392		5128	5523	5924	4154	4708	5086	5586	3901	4416	4852		
80	1730							2.94		3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43	1.44	0.95		
								6680		6164	6164	4304	4878	5270	5788	4032	4564	5015			
85	1838							3.32				2.80	1.62		2.57	1.63	0.97	2.74	1.62	1.07	
								6962				5966	6399		5043	5449	5984	4159	4709	5173	
90	1942											3.14	1.82		2.88	1.83	1.09	3.08	1.82	1.20	
												6181	6629		5204	5622	6175	4283	4849	5327	
95	2055											3.50	2.03		3.21	2.04	1.21	3.43	2.03	1.34	
												6390	6854		5361	5792	6361	4403	4985	5476	
100	2160												2.25		3.56	2.26	1.34	3.80	2.25	1.48	
													7074		5514	5958	6543	4521	5118	5622	
105	2265												2.48		3.92	2.50	1.48		2.48	1.63	
													7290		5664	6120	6721		5247	5765	
110	2375												2.72			2.74	1.63		2.72	1.79	
													7503			6278	6895		5374	5904	
115	2482												2.97			2.99	1.78		2.97	1.96	
													7711			6433	7065		5498	6040	
120	2590												3.24			3.26	1.94		3.24	2.13	
													7917			6586	7232		5619	6173	
125	2700												3.51			3.54	2.10		3.51	2.32	
													8119			6735	7396		5738	6303	
130	2810															2.27		3.80	2.51	1.45	
																7558		5854	6431	7082	
135	2918															2.45			2.70	1.57	
																7716			6557	7220	
140	3022															2.64			2.91	1.69	
																7872			6680	7356	
145	3130															2.83			3.12	1.81	
																8025			6802	7490	
150	3240															3.03			3.34	1.94	
																8176			6921	7621	
155	3350															3.23			3.56	2.07	
																8325			7038	7750	
160	3460															3.44			3.80	2.20	
																8471			7154	7877	
165	3565																		2.34	8002	
																			2.49	8126	
170	3675																			8126	

**Boldface Italics** indicate nozzle pressure (in. wg).

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes)

Δt = t<sub>rm</sub> - t<sub>ew</sub>

where, t<sub>rm</sub> = room temperature

t<sub>ew</sub> = ent water temperature

All ratings include allowance for lint screen.

**NOTES:**

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

# 36SD standard vertical unit (4-pipe)

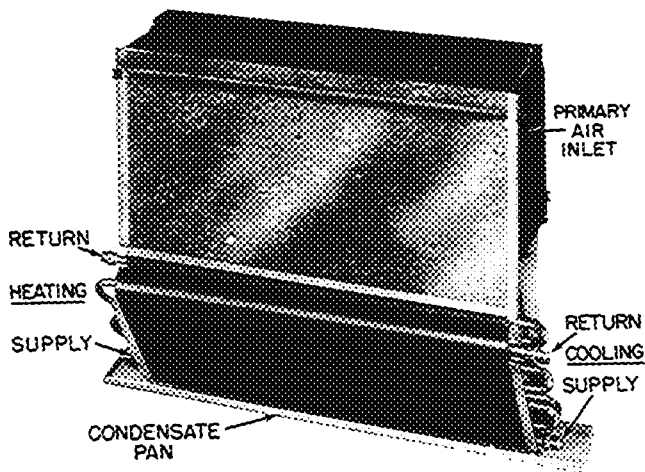
The 36SD base unit is shipped from the factory with the following

- plenum
- two 6-tube coils
- drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- speed nuts, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10-24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 28, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## Dimensions and physical data



BASE UNIT  
(Shown with optional flare fittings)

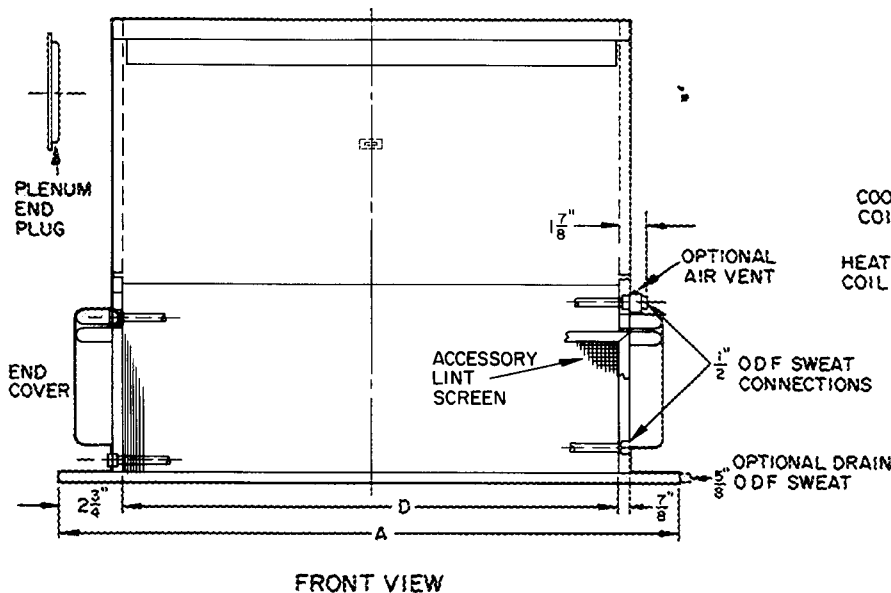
### GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)				
	140	120	100	80	60
1	3670	3060	2480	1900	1345
2	4895	4080	3310	2535	1795
3	6120	5100	4130	3165	2245
4	7955	6630	5370	4115	2915

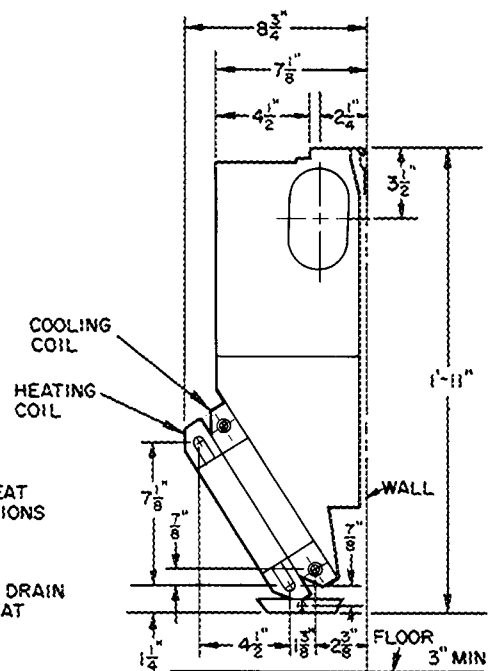
NOTE: For capacities other than 1.50 gpm, use the following multipliers - 0.75 for 0.60 gpm; 0.84 for 1.00 gpm, 1.15 for 2.00 gpm.

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)			
	140	120	100	80
Dimensions (in.)				
A	29 <sup>3</sup> / <sub>8</sub>	37 <sup>3</sup> / <sub>8</sub>	45 <sup>3</sup> / <sub>8</sub>	57 <sup>3</sup> / <sub>8</sub>
D	24 <sup>1</sup> / <sub>8</sub>	32	40	52
Minimum Free Areas (sq in.)				
Discharge Grille	81	108	134	175
Recirculation Grille	237	315	394	512

This is not a certified print. Certified dimensions available upon request.



FRONT VIEW



RIGHT SIDE VIEW

# Performance data

## 36SD COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR	Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																			
		F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	324	0.89																			
20	432	1.59	0.94			0.81															
25	540	2.48	1.47	0.97		1.26	0.74														
30	648	3.57	2.11	1.39		1.82	1.07	0.71		0.89											
35	756	2.88	1.90	1.10	2.48	1.46	0.97			1.21	0.71										
40	864	3.76	2.48	1.44	3.24	1.91	1.26	0.73	1.58	0.94				0.92							
		1383													2646						
45	972	4.129	3.14	1.82	4.108	2.42	1.60	0.93	2.01	1.19	0.78			1.17	0.72						
50	1080	3.88	2.72	1.82	4565	3.88	2.25	1.48	3.854	2.99	1.97	1.14	2.48	1.46	0.96	0.56	1.45	0.89		0.95	
55	1188		4.974	2.72	4542	3.62	2.39	1.39	3.00	1.77	1.17	0.68	1.75	1.07	0.68					2852	
60	1296		5.403	3.24	4974	4.113	2.85	1.65	3.57	2.11	1.39	0.81	2.09	1.28	0.81					2995	
65	1405		5.832	3.80	5832	4.923	3.34	1.94	4.881	2.48	1.63	0.95	2.45	1.50	0.95					3131	
70	1512					5.178	3.88	2.25	5.488	2.87	1.90	1.10	2.84	1.74	1.11					3545	
75	1620						2.58		5.753	3.30	2.18	1.26	3.26	2.00	1.27	0.75	2.13	1.26	0.83	3131	
80	1730						2.94		6.012	3.76	2.48	1.44	3.71	2.27	1.45	0.86	2.43	1.44	0.95	3545	
									6.012	4.803	3.173	2.548	3.873	4.390	4.743	5.209	3.629	4.108	4.513		
85	1838							3.32				2.80	1.62		2.57	1.63	0.97	2.74	1.62	1.07	
90	1942							3.72				3.14	1.82		2.88	1.83	1.09	3.08	1.82	1.20	
95	2055							6.515				5.563	5.966		4.684	5.060	5.557	3.855	4.364	4.794	
100	2160											3.50	2.03		3.21	2.04	1.21	3.43	2.03	1.34	
105	2265											5.751	6.168		4.825	5.213	5.725	3.963	4.486	4.929	
110	2375											3.87	2.25		3.56	2.26	1.34	3.80	2.25	1.48	
115	2482											5.936	6.367		4.963	5.362	5.888	4.069	4.606	5.060	
120	2590												2.48		3.92	2.50	1.48		2.48	1.63	
125	2700												2.72		5.098	5.508	6.048		4.722	5.188	
130	2810												6.752			6.752	7.205		4.836	5.313	
135	2918												2.97			2.99	1.78		2.97	1.96	
140	3022												6.940			5.790	6.359		4.948	5.436	
145	3130												3.24			3.26	1.94		3.24	2.13	
150	3240												7.125			5.927	6.509		5.057	5.556	
155	3350																				
160	3460																				
165	3565																				
170	3675																				

**Boldface italics** indicate nozzle pressure (in. wg)

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes) for a single coil.

$$\Delta t = t_{rm} - t_{ew}$$

where,  $t_{rm}$  = room temperature

$t_{ew}$  = ent water temperature.

All ratings include allowance for lint screen.

All ratings include reduction in capacity for double coil (4-pipe).

**NOTES:**

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at } 25 \text{ F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

# 36SJ standard horizontal unit (4-pipe)

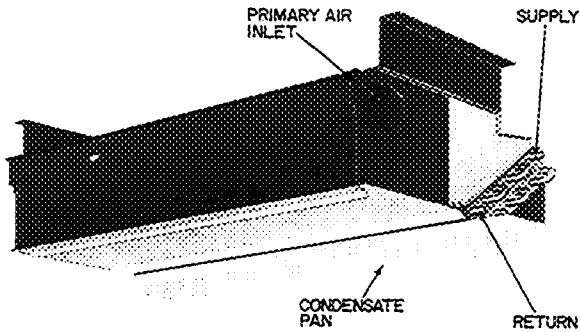
The 36SJ base unit is shipped from the factory with the following:

- plenum
- two 6-tube coils
- drain-pan, assembled
- two Z brackets for mounting unit to a rigid flat horizontal surface
- removable plenum end plug, located in one of the primary air inlets

- two screws and a lint clip, taped to the front panel of the unit, to attach an accessory lint screen to the coil
- two standard lint screen offerings, on coil face or on recirculation grille.

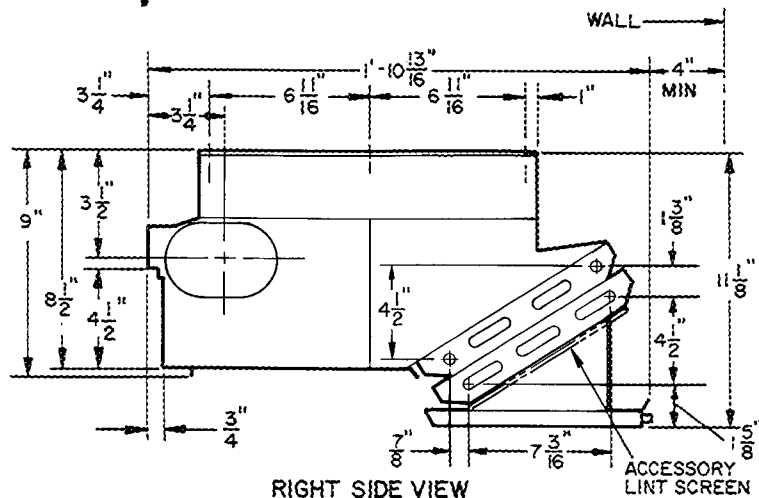
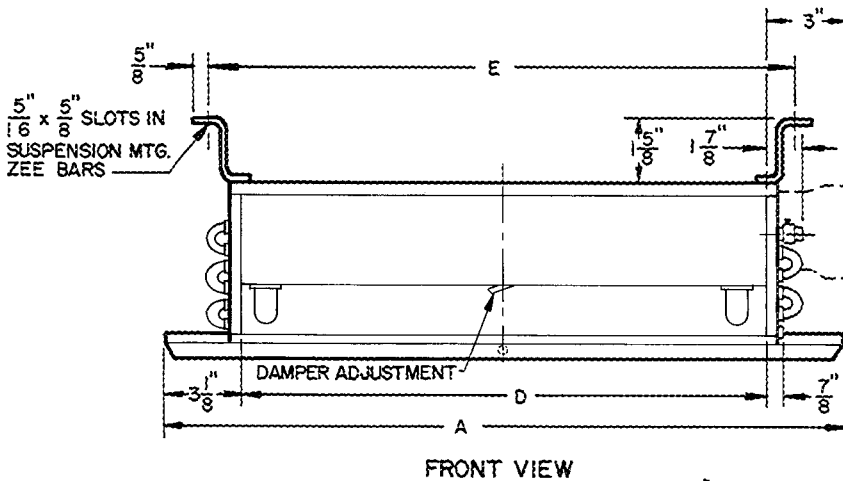
The coil has 1/2-in ODF sweat connections as standard. See Base Unit Accessories, page 28, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



UNIT SIZE	1	2	3	4
DIMENSIONS (in.)				
A	30 3/4	38 3/4	46 3/4	58 3/4
D	24 3/4	32	40	52
MINIMUM FREE AREAS (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	234	288	343	439

This is not a certified print. Certified dimensions available upon request.



# Performance data

## 36SJ COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR	NOZZLE ARRANGEMENT																				
	Cap. Cfm 20 F Δt (Btuh)	F				G				H				J				K			
		Unit Size																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
15 324	0.89 1383																				
20 432	1.59 1820	0.94 1872			0.81 1888																
25 540	2.48 2251	1.47 2316	0.97 2358		1.26 2199	0.74 2402															
30 648	3.57 2678	2.11 2756	1.39 2806		1.82 2490	1.07 2720	0.71 2904		0.89 2375												
35 756		2.88 3192	1.90 3250	1.10 3233	2.48 2766	1.46 3022	0.97 3227		1.21 2612	0.71 2884											
40 864		3.76 3625	2.48 3691	1.44 3672	3.24 3030	1.91 3310	1.26 3534	0.73 3746	1.58 2837	0.94 3131			0.92 2646								
45 972			3.14 4129	1.82 4108		2.42 3587	1.60 3830	0.93 4060	2.01 3050	1.19 3367	0.78 3627		1.17 2823	0.72 3200							
50 1080			3.88 4565	2.25 4542		2.99 3854	1.97 4116	1.14 4362	2.48 3255	1.46 3594	0.96 3870	0.56 4151	1.45 2991	0.89 3391			0.95 2852				
55 1188				2.72 4974		3.62 4113	2.39 4392	1.39 4655	3.00 3453	1.77 3811	1.17 4105	0.68 4403	1.75 3152	1.07 3573	0.68 3860		1.15 2995				
60 1296				3.24 5403			2.85 4661	1.65 4940	3.57 3643	1.39 4022	0.81 4331	2.09 4645	1.28 3307	0.81 3748	0.81 4049		1.36 3131	0.81 3545			
65 1405				3.80 5832			3.34 4923	1.94 5217		2.48 4225	1.63 4550	0.95 4881	2.45 3455	1.50 3917	0.95 4231		1.60 3263	0.95 3693			
70 1512							3.88 5178	2.25 5488		2.87 4423	1.90 4763	1.10 5109	2.84 3599	1.74 4079	1.11 4407		1.86 3389	1.10 3836	0.72 4215		
75 1620								2.58 5753		3.30 4615	2.18 4971	1.26 5331	3.26 3738	2.00 4237	1.27 4578	0.75 5027	2.13 3511	1.26 3974	0.83 4366		
80 1730								2.94 6012		3.76 4803	2.48 5173	1.44 5548	3.71 3873	2.27 4390	1.45 4743	0.86 5209	2.43 3629	1.44 4108	0.95 4513		
85 1838								3.32 6265			2.80 5370	1.62 5759		2.57 4539	0.97 4904	2.74 5385	1.62 3743	1.07 4238			
90 1942								3.72 6515			3.14 5563	1.82 5966		2.88 4684	1.09 5060	3.08 3855	1.82 4364	1.20 4794	0.69 5279		
95 2055											3.50 5751	2.03 6168		3.21 4825	2.04 5213	3.43 3963	2.03 4486	1.34 4929	0.77 5427		
100 2160											3.87 5936	2.25 6367		3.56 4963	2.26 5362	3.80 4069	2.25 4606	1.48 5060	0.86 5572		
105 2265											2.48 6561			3.92 5098	2.50 5508	1.48 6048	2.48 4722	1.63 5188	0.95 5713		
110 2375											2.72 6752				2.74 5650	1.63 6205	2.72 4836	1.79 5313	1.04 5851		
115 2482											2.97 6940				2.99 5790	1.78 6359	2.97 4948	1.96 5436	1.14 5986		
120 2590											3.24 7125				3.26 5927	1.94 6509	3.24 5057	2.13 5556	1.24 6118		
125 2700											3.51 7307				3.54 6061	2.10 6657	3.51 5164	2.32 5673	1.34 6247		
130 2810											3.80 7486				3.83 6194	2.27 6802	3.80 5269	2.51 5788	1.45 6374		
135 2918															2.45 6944			2.70 5901	1.57 6498		
140 3022															2.64 7084			2.91 6012	1.69 6620		
145 3130															2.83 7222			3.12 6121	1.81 6741		
150 3240															3.03 7358			3.34 6229	1.94 6859		
155 3350															3.23 7492			3.56 6334	2.07 6975		
160 3460															3.44 7624			3.80 6438	2.20 7089		
165 3565															3.66 7754				2.34 7202		
170 3675															3.89 7882				2.49 7313		

*Boldface italics* indicate nozzle pressure (in. wg)

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes) for a single coil.

Δt = t<sub>rm</sub> - t<sub>ew</sub>

where, t<sub>rm</sub> = room temperature

t<sub>ew</sub> = entering water temperature

All ratings include allowance for lint screen.

All ratings include reduction in capacity for double coil (4-pipe).

### NOTES:

1. Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2. See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm.

3. To facilitate balanced water systems, all units, regardless of size, have the same pressure drop.

# 36SM lobby unit (4-pipe)

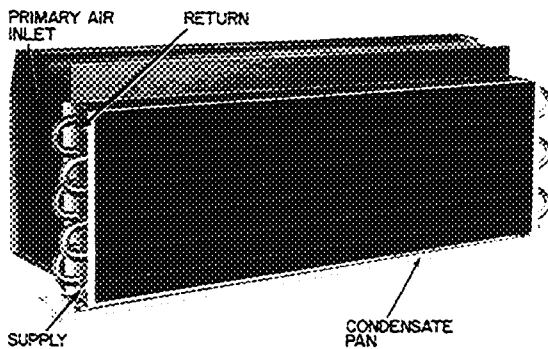
The 36SM base unit is shipped from the factory with the following:

- plenum
- two 6-tube coils
- drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- speed nuts, located in the back flange on each end of the plenum for leveling the unit with field-supplied 10–24 bolts.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 28, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



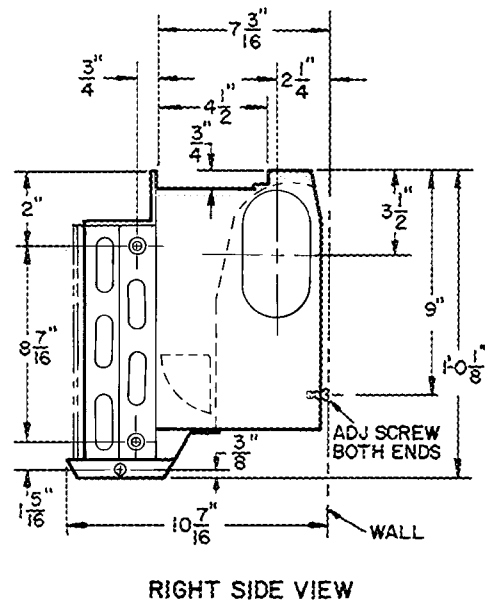
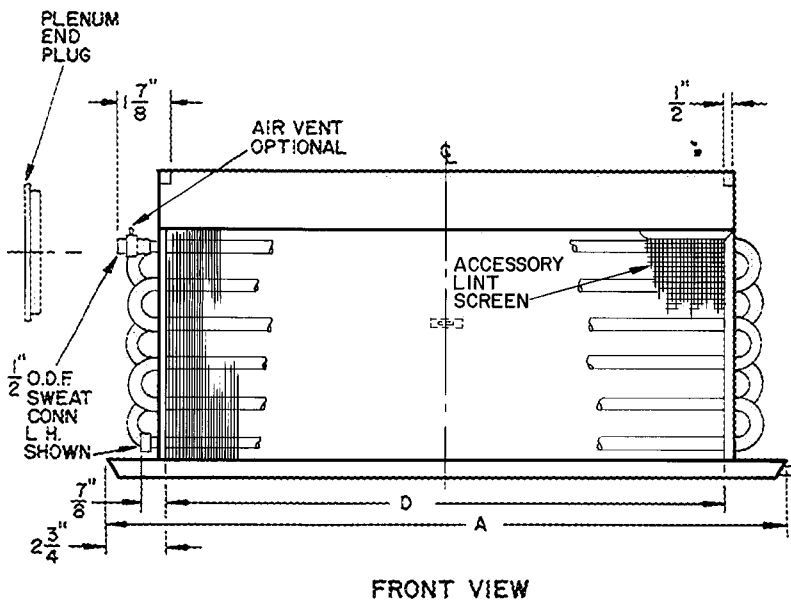
### GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water - Room Temp) (F)				
	140	120	100	80	60
1	3402	2835	2297	1758	1247
2	4536	3780	3062	2344	1663
3	5670	4725	3827	2930	2079
4	7371	6142	4975	3808	2703

NOTE For capacities other than 1.50 gpm, use the following multipliers - 0.75 for 0.60 gpm, 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
DIMENSIONS (in.)				
A	29 3/8	37 1/2	45 1/2	57 1/2
D	24 3/8	32	40	52
MINIMUM FREE AREAS (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	124	165	206	269

This is not a certified print. Certified dimensions available upon request.





# Performance data

## 36SM COOLING COIL CAPACITIES (Btuh)

Cfm	PRIMARY AIR Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																				
		F				G				H				J				K				
		Unit Size																				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
15	324	0.89 1517																				
20	432	1.59 1996	0.94 2054			0.81 1979																
25	540	2.48 2469	1.47 2540	0.97 2587		1.26 2304	0.74 2516															
30	648	3.57 2938	2.11 3022	1.39 3079		1.82 2609	1.07 2850	0.71 3043		0.89 2375												
35	756		2.88 3500	1.90 3565	1.10 3546	2.48 2899	1.46 3166	0.97 3381		1.21 2612	0.71 2884											
40	864		3.76 3976	2.48 4048	1.44 4027	3.24 3175	1.91 3468	1.26 3703	0.73 3926	1.58 2837	0.94 3131			0.92 2523								
45	972		3.14 4529	1.82 4506		2.42 3758	1.60 4013	0.93 4254	2.01 3050	1.19 3368	0.78 3627		1.17 2691	0.72 3050								
50	1080		3.88 5007	2.25 4981		2.99 4039	1.97 4312	1.14 4571	2.48 3255	1.46 3594	0.96 3870	0.56 4151	1.45 2852	0.89 3231				0.95 2560				
55	1188			2.72 5454		3.62 4310	2.39 4602	1.39 4958	3.00 3453	1.77 3812	1.17 4105	0.68 4403	1.75 3005	1.07 3407	0.68 3680			1.15 2687				
60	1296			3.24 5926			2.85 4883	1.65 5176	3.57 3643	2.11 4022	1.39 4335	0.81 4646	2.09 3152	1.28 3573	0.81 3861			1.36 2809	0.81 3181			
65	1405			3.80 6396			3.34 5158	1.94 5467		2.48 4226	1.63 4559	0.95 4881	2.45 3294	1.50 3734	0.95 4034			1.60 2927	0.95 3314			
70	1512						3.88 5425	2.25 5750		2.87 4424	1.90 4769	1.10 5109	2.84 3431	1.74 3889	1.11 4202			1.86 3040	1.10 3442	0.72 3782		
75	1620							2.58 6028		3.30 4615	2.18 4971	1.26 5332	3.26 3564	2.00 4039	1.27 4364	0.75 4793	2.13 3151	1.26 3566	0.83 3918			
80	1730							2.94 6300		3.76 4803	2.48 5172	1.44 5548	3.71 3693	2.27 4183	1.45 4522	0.86 4966	2.43 3256	1.44 3686	0.95 4050			
85	1838							3.32 6565			2.80 5370	1.62 5759		2.57 4327	1.63 4675	0.97 5134	2.74 3359	1.62 3803	1.07 4177			
90	1942							3.72 6826			3.14 5563	1.82 5966		2.88 4465	1.83 4824	1.09 5298	3.08 3459	1.82 3915	1.20 4301	0.69 4736		
95	2055										3.50 5751	2.03 6169		3.21 4600	2.04 4970	1.21 5458	3.43 3556	2.03 4025	1.34 4423	0.77 4870		
100	2160										3.87 5936	2.25 6367		3.56 4731	2.26 5112	1.34 5614	3.80 3651	2.25 4133	1.48 4540	0.86 5000		
105	2265											2.48 6561		3.92 4860	2.50 5251	1.48 5766		2.48 4237	1.63 4655	0.95 5126		
110	2375											2.72 6753			2.74 5387	1.63 5916		2.72 4340	1.79 4768	1.04 5250		
115	2482											2.97 6940			2.99 5520	1.78 6061		2.97 4440	1.96 4877	1.14 5370		
120	2590											3.24 7126			3.26 5651	1.94 6205		3.24 4537	2.13 4985	1.24 5489		
125	2700											3.51 7307			3.54 5780	2.10 6346		3.51 4633	2.32 5090	1.34 5605		
130	2810											3.80 7485			3.83 5905	2.27 6485		3.80 4727	2.51 5194	1.45 5719		
135	2918														2.45 6620			2.70 5295	1.57 5830			
140	3022														2.64 6754			2.91 5395	1.69 5940			
145	3130														2.83 6885			3.12 5493	1.81 6048			
150	3240														3.03 7075			3.34 5589	1.94 6154			
155	3350														3.23 7142			3.56 5683	2.07 6259			
160	3460														3.44 7268			3.80 5777	2.20 6361			
165	3565														3.66 7392				2.34 6462			
170	3675														3.89 7515				2.49 6560			

*Boldface italics* indicate nozzle pressure (in. wg).

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes) for a single coil.

Δt = t<sub>rm</sub> - t<sub>ew</sub>

where, t<sub>rm</sub> = room temperature

t<sub>ew</sub> = ent water temperature

All ratings include allowance for lint screen.

All ratings include reduction in capacity for double coil (4-pipe).

NOTES:

1 Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at } 25 \text{ F } \Delta t$$

2 See Coil Capacity Multipliers For Flow Rates table for capacities other than 1.50 gpm

3 To facilitate balanced water systems, all units, regardless of size, have the same pressure drop

# 36SP vertical unit with recovery stack (4-pipe)

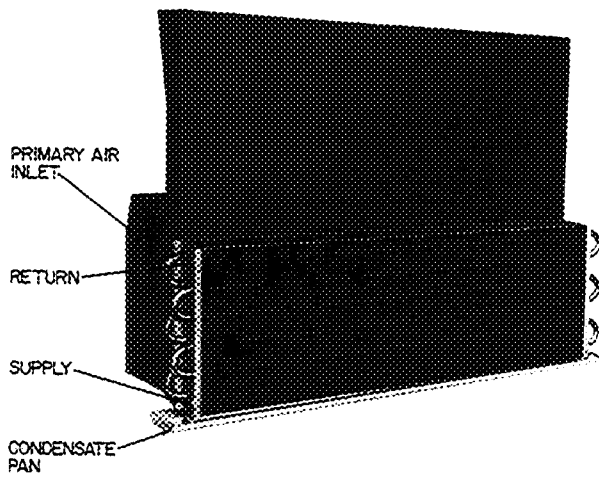
The 36SP base unit is shipped from the factory with the following

- plenum
- two 6-tube coils
- recovery stack and drain pan, assembled ready for wall mounting
- removable plenum end plug, located in one of the primary air inlets

- two lint screen clips, taped to the bottom of the drain pan, to attach an accessory lint screen to the coil
- speed nuts, located in the back flange on each end of the plenum, with two 10–24 bolts for leveling the unit.

The coil has 1/2-in. ODF sweat connections as standard. See Base Unit Accessories, page 28, for optional connections. The accessory lint screen and air transition fitting, shipped separately, complete the unit.

## → Dimensions and physical data



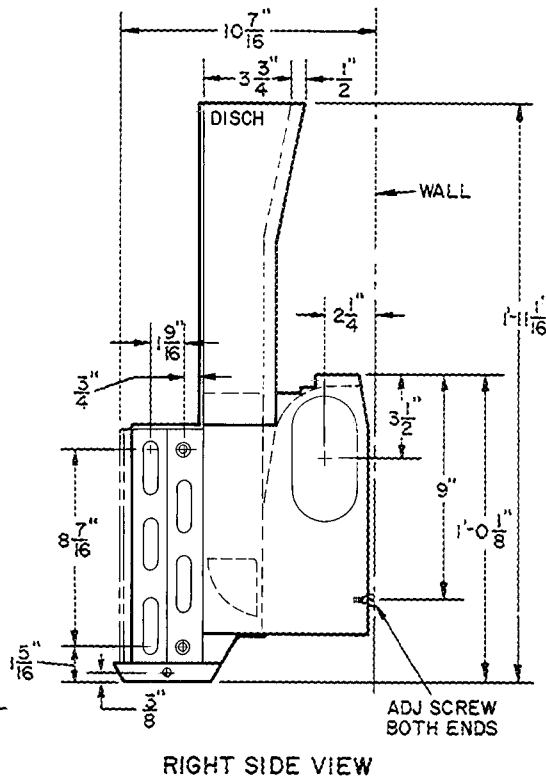
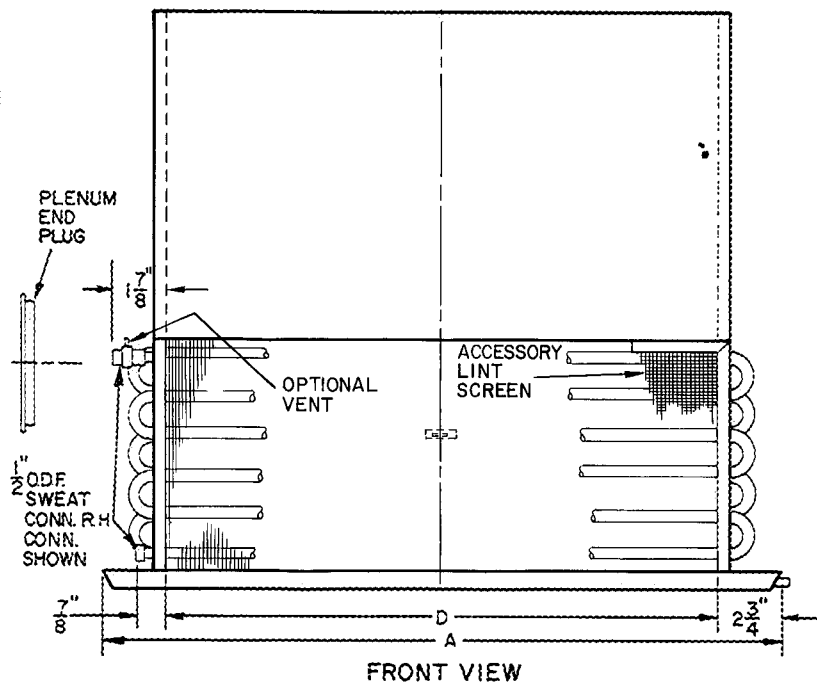
### GRAVITY HEATING CAPACITIES (Btuh)

UNIT SIZE	TEMPERATURE DIFFERENCE (Ent Water – Room Temp) (F)				
	140	120	100	80	60
1	5000	4167	3375	2584	1834
2	6670	5558	4502	3446	2446
3	8333	6944	5625	4305	3055
4	10,833	9027	7312	5597	3972

NOTE: For capacities other than 1.50 gpm, use the following multipliers – 0.75 for 0.60 gpm; 0.84 for 1.00 gpm; 1.15 for 2.00 gpm.

UNIT SIZE	1	2	3	4
DIMENSIONS (in.)				
A	29½	37½	45½	57½
D	24½	32	40	52
MINIMUM FREE AREAS (sq in.)				
Discharge Grille	81	108	135	175
Recirculation Grille	237	315	394	512

This is not a certified print. Certified dimensions available upon request.



# Performance data

## 36SP COOLING COIL CAPACITIES (Btuh)

PRIMARY AIR Cfm	Cap. 20 F Δt (Btuh)	NOZZLE ARRANGEMENT																			
		F				G				H				J				K			
		Unit Size																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
15	324	0.89 1851																			
20	432	1.59 2436	0.94 2505		0.81 2375																
25	540	2.48 3012	1.47 3100	0.97 3156	1.26 2765	0.74 3021															
30	648	3.57 3584	2.11 3687	1.39 3754	1.82 3132	1.07 3421	0.71 3652		0.89 2803												
35	756		2.88 4270	1.90 4348	1.10 4326	2.48 3479	1.46 3800	0.97 4057	1.21 3083	0.71 3403											
40	864		3.76 4850	2.48 4939	1.44 4912	3.24 3811	1.91 4162	1.26 4445	0.73 4710	1.58 3347	0.94 3695		0.92 2900								
45	972			3.14 5525	1.82 5496		2.42 4510	1.60 4816	0.93 5104	2.01 3000	1.19 3974	0.78 4280		1.17 3094	0.72 3508						
50	1080			3.88 6108	2.25 6077		2.99 4847	1.97 5175	1.14 5485	2.48 3841	1.46 4241	0.96 4568	0.56 4899	1.45 3279	0.89 3716		0.95 2893				
55	1188				2.72 6654		3.62 5172	2.39 5523	1.39 5854	3.00 4074	1.77 4497	1.17 4894	0.68 5195	1.75 3455	1.07 3916	0.68 4231	1.15 3038				
60	1296				3.24 7230		2.85 5861	1.65 6212	3.57 4300	2.11 4746	1.39 5111	0.81 5482	2.09 3625	1.28 4108	0.81 4439		1.36 3177	0.81 3596			
65	1405				3.80 7812		3.34 6190	1.94 6562		2.48 4986	1.63 5370	0.95 5760	2.45 3788	1.50 4293	0.95 4591		1.60 3309	0.95 3746			
70	1512						3.88 6511	2.25 6901		1.90 5219	1.10 5621	2.84 6030	1.74 3945	1.11 4471			1.86 3438	1.10 3899			
75	1620							2.58 7233		3.30 5446	2.18 5865	1.26 6291	3.26 4098	2.00 4645	1.27 5018	0.75 5511	2.13 3562	1.26 4032			
80	1730							2.94 7559		3.76 5667	2.48 6104	1.44 6547	3.71 4245	2.27 4812	1.45 5200	0.86 5710	2.43 3682	1.44 4167			
85	1838							3.32 7878			2.80 6336	1.62 6796		2.57 4975	1.63 5375	0.97 5903	2.74 3797	1.62 4300			
90	1942							3.72 8191			3.14 6564	1.82 7090		2.88 5134	1.83 5547	1.09 6092	3.08 3910	1.82 4426			
95	2055										3.50 6787	2.03 7280		3.21 5289	2.04 5714	1.21 6275	3.43 4020	2.03 4551			
100	2160										3.87 7005	2.25 7513		3.56 5440	2.26 5878	1.34 6454	3.80 4127	2.25 4672			
105	2265										2.48 7743			3.92 5588	2.50 6037	1.48 6630		2.48 4790	1.63 5262	0.95 5795	
110	2375										2.72 7968				2.74 6194	1.63 6802		2.72 4906	1.79 5390	1.04 5935	
115	2482										2.97 8190				2.99 6397	1.78 6970		2.97 5018	1.96 5514	1.14 6072	
120	2590										3.24 8408				3.26 6497	1.94 7134		3.24 5130	2.13 5636	1.24 6205	
125	2700										3.51 8622				3.54 6644	2.10 7296		3.51 5238	2.32 5757	1.34 6337	
130	2810										3.80 8834				3.83 6790	2.27 7455		3.80 5344	2.51 5871	1.45 6465	
135	2918														2.45 7612				2.70 5986	1.57 6592	
140	3022														2.64 7765				2.91 6099	1.69 6716	
145	3130														2.83 7917				3.12 6210	1.81 6837	
150	3240														3.03 8065				3.34 6318	1.94 6957	
155	3350														3.23 8212				3.56 6425	2.07 7076	
160	3460														3.44 8357				3.80 6531	2.20 7191	
165	3565														3.66 8500					2.34 7306	
170	3675														3.89 8640					2.49 7418	

*Boldface italics* indicate nozzle pressure (in. wg).

Ratings based on:

25 Δt, 1.50 gpm, 8-ft water coil pressure drop (all sizes) for a single coil.

$$\Delta t = t_{rm} - t_{ew}$$

where,  $t_{rm}$  = room temperature

$t_{ew}$  = ent water temperature

All ratings include allowance for lint screen.

All ratings include reduction in capacity for double coil (4-pipe).

### NOTES:

1 Coil capacity for other than 25 F Δt:

$$\frac{t_{rm} - t_{ew}}{25} \times \text{rating at 25 F } \Delta t$$

2 See Coil Capacity Multipliers For Flow Rates table for capacities other than 1 50 gpm

3 To facilitate balanced water systems, all units, regardless of size, have the same pressure drop

# Accessories

**Enclosures** — decorator-styled factory built cabinets are available for 36S Series Weathermaster® induction air terminals. For details, consult your Carrier representative. Grilles, runouts, choice of colors, and additional enclosure accessories for a column-to-column appearance are also available. Certified prints showing details of the enclosure accessories are available upon request. All unit enclosures must maintain published minimum free areas to ensure unit performance.

**Special unit lengths** — can be built to accommodate a mullion (dead space), special application, or special requirement and are considered on a special order basis.

## Furred-in application accessories for vertical units\*

**Discharge grille frame** — made of stamped steel with a baked prime finish. Holds either the discharge grille with access door or the plastic discharge grille sections.

**Discharge grille with access door** — also has a baked prime finish made of stamped steel.

Two types of plastic discharge grille sections — aerodynamically designed, modular construction, 4- and 7-blade configurations.

**Recirculation grille panel and frame** — made of stamped steel, with baked prime finish. Easily removable for service, maintenance.

\*Standard color is parchment beige; other colors available on a special order basis

## Base unit accessories

**Lint screen** — is required to maintain maximum coil efficiency. The galvanized screen and frame attaches to coil with 2 lint screen clips provided with the base unit, protects coil from dirt and lint. Easily removable for cleaning. Sized to each coil or unit requirement. Aluminum screens available on a special-order basis.

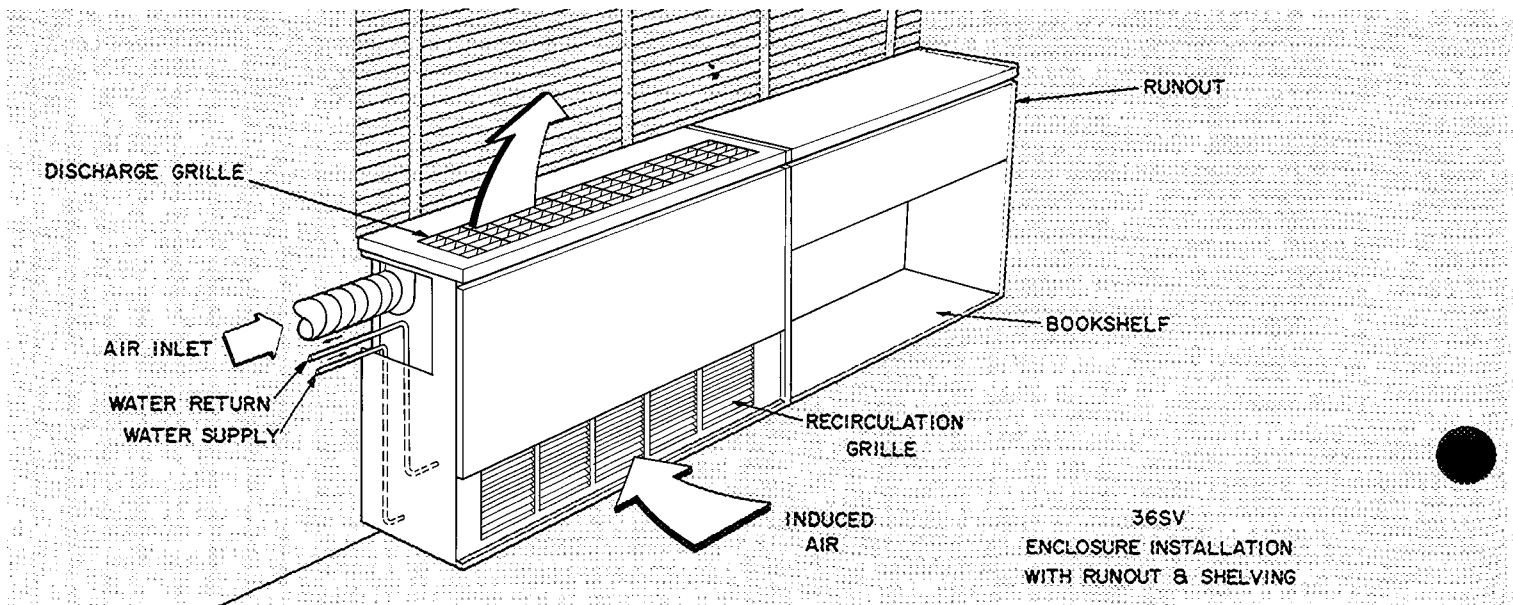
**Wall mounting strip** — required for hanging all vertical units, enclosures, enclosure accessories. For details, consult your Carrier representative.

**Emergency condensate pan** — available for times of high latent loads, such as start-up or abnormal condition. The optional drainable pan has 5/8-in. ODF sweat connection and is available for all models and sizes.

**Air transition fitting** — provides air transition from the oval entrance on the unit to a standard 4-in. round duct. Maximum air quantity is 220 cfm.

**Coil connections** — four types of coil connections available. 1/2-in. ODF sweat connections are supplied standard. Optional connections: 1/2-in. ODF sweat with manual air vent, 1/2-in. ODM flare; 1/2-in. ODM flare with manual air vent.

# Typical installations



# Guide specifications

## For standard installations with enclosures

1. **Furnish and install** \_\_\_\_\_ Model 36S Water Control Weathermaster® units of the type, size and arrangement shown on the plans.
- 2a. **Base unit assembly** shall consist of an air inlet, air plenum, induction nozzles, water coil assembly (lint screen or filter), air transition fitting, air plug and nondrainable (drainable) condensate pan.
- 2b. **Air plenum** shall be constructed of galvanized steel. Internal areas shall be acoustically and thermally insulated with neoprene-coated fiber glass. Plenum shall be designed for series connection or feed-thru, and shall contain primary air balancing damper arranged for independent manual adjustment of primary air volume. Recovery stack and outlet collar where required shall be cold-rolled steel painted black.
- 2c. **Induction nozzles** of heat resistant, pliable plastic shall be designed for minimum noise generation. Nozzle arrangement shall be selected to provide capacities as specified.
- 2d. **Water coil assembly** shall consist of a single-row reversible coil with copper tubing mechanically expanded to aluminum plate fins. (Two separate coils shall be furnished for 4-pipe operation.) Coil connections shall be 1/2-in. ODF sweat (1/2-in. ODM flare) (1/2-in. ODF sweat with vent) (1/2-in. ODM flare with vent). Coil shall be suitable for working pressures up to 250 psig. Nondrainable (drainable) galvanized steel condensate pan shall complete the assembly.
- 2e. **Air transition fitting** for connection to 4-in. runout duct shall be die-formed, streamlined and interchangeable with removable air plug.
- 2f. **Lint screen** shall be of fine mesh, properly supported and readily removable for servicing.
- 3a. **Base unit enclosure** shall be constructed of not lighter than 18-gage, cold-rolled steel, bonderized, recoatable baked prime finish. Enclosure shall consist of: removable front access panel with snap-in fasteners to permit easy removal for routine inspection and servicing of unit and controls; removable plastic discharge grille sections designed for 4-way adjustment of air flow,

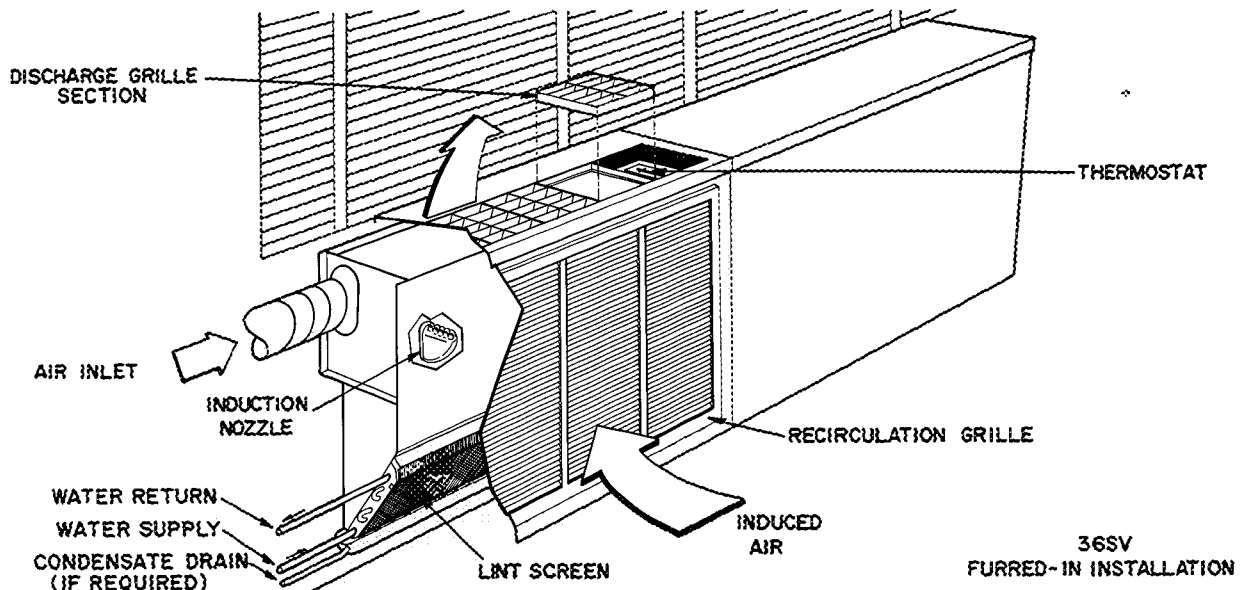
mounting brackets and suitable accessories for base unit assembly as shown on the plans.

- 3b. **Under-window type enclosures** shall be floor-fed or side-fed as indicated on drawings. Floor-fed enclosures for SV, SC, ST shall be complete with decorative side panels and pedestals with louvers as required. Side-fed enclosures for model SV shall be complete with knockout.
- 3c. **Runout enclosure and panel sections** shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish.
- 3d. **Overhead horizontal enclosure** for model SH shall be complete with support brackets for base unit, hinged bottom panel, and single-blade discharge grille.

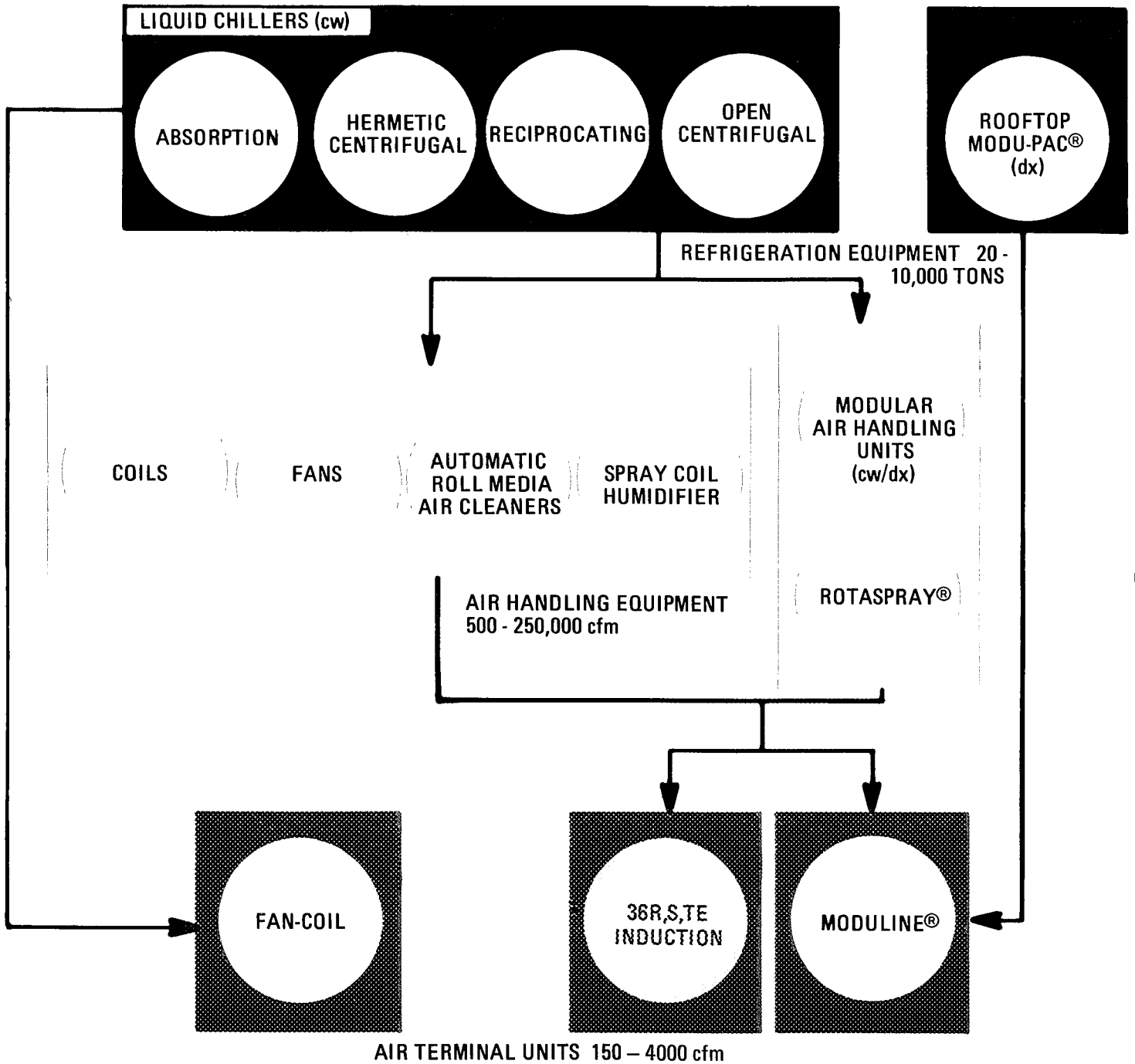
## For vertical furred-in installations




Omit paragraphs 3a, b, c and d. Add paragraphs 4 and 5.

- 4a. **Discharge grille assembly** shall consist of grille frame with integral mounting collar and removable plastic grille sections, designed for individual 4-way adjustment of air flow. Grille frames shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish, with rolled edges and corners. Frame shall be provided with mounting holes for securing to window stool.
- 4b. **Recirculating grille panel** shall be constructed of not lighter than 18-gage cold-rolled steel, bonderized, recoatable baked prime finish. Panel shall have louvered section with free area not less than indicated on plans and shall be designed for easy removal from frame for routine inspection and servicing. Panel shall fit securely in a frame and be provided with necessary stiffener channels to prevent warping. The frame shall be constructed of black iron angles, welded at corner sections, bonderized and finished in recoatable prime coat. Frame shall be provided with holes or suitable devices for attachment to metal lath or tile block.
- 4c. **All custom enclosures** must meet published minimum free area requirements.
5. Refer to temperature control system specifications for induction unit controls.



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



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